

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 14, 1880.

THE ADVANTAGES ATTAINABLE BY SUCH AN ORGANIZATION AS THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Being the Address delivered

BY HENRY H. SMITH, M.D.,

Retiring President of the Society, January 28, 1880.

IN accordance with the by-law of this Society, which requires that the President shall, "at the close of his term of office, deliver a public address," I appear before you.

In the performance of a duty which has usually been annual in its occurrence, and with the addresses of former officers yet lingering in your minds, it is not easy to present any subject worthy of your consideration that can offer the claim of novelty.

As the framers of this by-law appear to have ignored the fact of our having a prolific press, that scatters daily among us the sentiments of domestic as well as of foreign societies, but require you to listen to the views of your own presiding officer at a fixed period, I yield obedience to the custom, only suggesting that if the subject this evening presented proves wearisome and unprofitable, the abrogation of the rule which necessitates it is in your own hands.

As appropriate to the present occasion, I might justly offer a review of the papers and acts of the Society during the three years in which I have had the honor of presiding over your deliberations. This, however, has been recently laid before you in the published Transactions of the Society.

Believing that it is useful, both to individuals and corporations, to revise at stated periods their acts of omission and commission, weighing carefully the value of the things done and the things left undone, I now propose for your consideration "The advantages attainable by such an organization as the Philadelphia County Medical Society."

I present this subject with less hesitation, because I trust that a thorough and correct appreciation of its principles will have an ennobling effect on all our members, and promote that "elevation of character and study of the means calculated to render the medical profession useful to the public and subservient to the interests of humanity," which is the object declared in our charter to be the basis of our organization.

The Philadelphia County Medical Society, now composed of two hundred and seventy-five members, is a body corporate, formed by the regular physicians of the city and county of Philadelphia. It is favorably and widely known in the city, in the State of Pennsylvania, and throughout the United States; sending distinguished representatives to all

the meetings of the State Society and the American Medical Association. In the latter body it is the only professional organization in Philadelphia entitled to representation in this great medical council of our country.

Founded with the view of stimulating each member to the attainment of the highest development of which a noble profession is capable, as well as of augmenting the usefulness and general benevolence of an organization, our charter directs "that the main object of this Society shall be the investigation of the diseases and remedies presented in our own country, whilst also seeking the avenues of knowledge created by the discoveries and publications of foreign countries. At the same time the Society is directed to labor to elevate the character and protect the rights and interests of its members, and to study the means calculated to increase the public utility of this body."

To carry out these objects, none but regular physicians, graduates of a respectable medical school at least one year before nomination, and also engaged during one year in the regular practice of medicine in Philadelphia, can be named for membership; and the result has been the creation of a power whose influence for good is felt both in and out of the profession. If the old proverb is true, "*ex collisione scintilla*," it is evident that the assembling together of the experience and talent that have long characterized the physicians of Philadelphia and made her medical schools celebrated throughout the world, must elicit an amount of mental scintillations that will not only warm and stimulate an *esprit du corps*, but also enlighten the community on various sanitary and humanitarian measures.

To belong to such a body; to participate in its discussions; to bear its test of professional scrutiny as to the true value of our professional qualifications; to listen to the words of the wise and fathom the depths of their knowledge, is a privilege that cannot be too highly estimated by all, and especially by our younger members. The latter also benefit by the opportunities afforded them of exhibiting their own attainments.

An ignorant and indiscriminating public may be led accidentally to estimate highly the professional qualifications of the medical aspirant for public favor; but there is no opinion of a court of judicature more likely to weigh and define the true value of his skill and knowledge than that given by his County Society, after listening to a paper of his own selection, or testing his professional knowledge in the sentiments elicited and criticised within the limits of a courteous and well-regulated debate.

Admitting that such tests show and magnify the honor held by a member of the Society, how much greater is that honor, and also responsibility, accepted by him who becomes an

officer of such a body! Partiality from social intercourse, or the wish to compliment a friend, may perhaps place an undeserving member in a prominent position; but if he possesses no fund of medical acquirements, or is wanting in a high estimate of professional duty, all the enthusiasm of his partisans cannot sustain him in the execution of acts which will be weighed in the balance of a well-poised medical mind, and tested by honesty of purpose and an unselfish devotion to the promotion of the great interests of our Association.

By such tests all should be judged; and happy indeed may he be esteemed who is able to sustain such a scrutiny and receive the approval of his fellow-members.

Impressed apparently with this high estimate of the duties and honors entailed upon membership in our Society, the framers of its by-laws surrounded every proposition of a candidate with stringent requisites. "The place and date of his graduation in medicine, and his term of practice and residence in Philadelphia, must be stated under the signatures of three members who have a personal knowledge of his professional qualifications as well as of his moral character."*

To give additional weight to the honor shown in his election and exhibit to the Society his true worth, every such proposition must also be approved and recommended by our Board of Censors, men specially appointed as guardians of the professional honor and character of the Society, and then, after their recommendation is adopted, the candidate must receive two-thirds of the favorable votes of the members present at a stated meeting at which there are at least twenty members, the result being officially announced by our President.

Guarded by these preliminaries, the candidate subsequently enters the Society on the introduction of the presiding officer, to whom he makes a solemn and public pledge "to use his best endeavors to promote the objects of the Association." These objects, as has been before shown, are of the most elevated and ennobling character; and it behooves each member to recall his initiation vow and advance as far as possible the interest and active development of this organization. If every one would constantly observe his pledge and correct the tone of those who wish to decry the value of the Society's labors, perhaps because jealous of its claims or fearful of its power in restraining them from unprofessional acts, the importance of this Society as a governing element in the profession in this city, as well as elsewhere, would soon be distinctly and widely recognized.

As a correct appreciation of the extent of a subject tends greatly to its proper study and comprehension, our County Society adopts the Code of Ethics of the American Medical Association as a part of its regulations, and makes it

incumbent on every member to observe it. A brief reference to some points in that Code cannot, therefore, but prove useful in connection with our present subject. Starting with a description of the duties of a physician to his patient, the Code says "his mind ought always to be imbued with the greatness of his mission and the responsibility he habitually incurs in its performance." These obligations, it goes on to say, "are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge the penalties of carelessness and neglect. Hence he should recollect in every case that the health and lives of those committed to his care depend on his skill, attention, and fidelity."†

Whilst acknowledging the correctness of this obligation, few of us perhaps perfectly realize the high estimate and tone that is essential to its full acquisition and development. I quote, therefore, the following able remarks of the late Dr. Latham, of London, as given in his clinical lectures at St. Bartholomew's Hospital. Speaking of the necessity of physicians devoting their *entire* study to the disorders of the human frame and making these their sole and continual care, he says, "Is it possible for any one to feel an interest in a subject like this?"

"Ay indeed is it; a greater, far greater interest than ever painter or sculptor took in developing the form and beauties of its health.

"Whence comes this interest? At first, perhaps, it does not come naturally. A mere sense of duty engenders it, and still for a time a mere sense of *duty* must keep it alive; but presently the quick, curious, restless spirit of science enlivens it, and *then* it becomes an excitement, a pleasure, and the deliberate choice of the mind.

"When the interest of studying disease and of attending the sick has reached this point, there arises from it, or has already arisen, a ready power of discerning diseases, with a skill in the use of remedies.

"And the skill may exalt the interest, and the interest may improve the skill, until, in time, experience forms the consummate practitioner. But does the interest felt in attending the sick necessarily stop here? The question may seem strange. If it has led to the readiest discernment and the highest skill and formed the consummate practitioner, why need it go further?

"But what if humanity shall warm it? Then this interest, this excitement, this intellectual pleasure, is exalted into a *principle*, invested with a moral motive, and passes into the heart.

"What if it be carried still further? What if Religion should animate it?

"Why, then, happy indeed is the man whose mind, whose moral nature, and whose spiritual being are all harmoniously engaged in the daily business of his life, with whom the same act has become his own happiness,—

* Article I. of By-Laws.

† Code of Ethics.

a dispensation of mercy to his fellow-creatures and a worship of his God."*

Such a combination of qualifications, and such an estimate of them, though difficult of attainment, should be the aim of every high-toned physician, and a society formed by such men, properly organized, becomes of itself a powerful means towards its accomplishment.

In the study of diseases, as illustrated by the papers read by our members, and in the sentiments expressed in their discussion by other well-trained minds, there is certainly an influence exerted that only requires to be thought of, in order to realize its high value. When in addition to this purely medical force there is exhibited the warmth of the humanitarian principle, shown in the labors of those who not only study diseased action, but also endeavor to prolong the lives of their fellow-citizens by preventing the development and spread of all forces likely to prove injurious to health, it follows that such an organization must exercise a most beneficial influence on the creation of a high moral and professional tone in its members, as well as on the community generally. Whilst our Code of Ethics endeavors to excite a clear comprehension on the part of physicians, and consequently of our County Societies, of the importance of their duties to their patients, it also strives to define with equal accuracy "the duties of patients to their physicians," a reciprocal action necessary to the proper development of their relative positions. It is, however, a singular fact, and one greatly to be regretted, that all these wise expressions of the obligations of patients to their physicians should remain entirely unknown to patients, though carefully studied by ourselves.

Why no means have been resorted to by the profession to extend this information to those for whom it is especially intended, is difficult to explain. Opportunities are not wanting, in medical addresses before the public, in the introductory or valedictory discourses of our medical schools or medical convocations, the proceedings of which are often fully printed in our daily journals, to enlighten the community on a subject in which they have so vital an interest. So natural and full of common sense are the expressed obligations of patients to their physicians as stated in the Code of Ethics, that every one will admit it. Starting with a reference to the many important duties towards the community enjoined on physicians, and their sacrifice of comfort, ease, and pleasure for the welfare of their patients, this Code clearly shows that "patients should entertain a just sense of the duties due their physicians, especially in selecting for this important office one who has received a regular professional education."

"In no trade or occupation," says the Code, "do mankind rely on the skill of an untaught

artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive."†

Though this is so true that no sensible person will deny it, how seldom is it observed by the masses who require medical aid! Quackery in all its forms is rampant everywhere, and remedies are vaunted as "cures" with a boldness of assertion highly characteristic of ignorance. Why is this? Simply because quackery subsidizes the press, and by advertisements and handbills calls public attention to its cures and the certificates of those whom it has already duped.

Now, what is the profession doing to counteract this open attack upon its claims to public consideration? Absolutely nothing. It gives, as we have seen, excellent advice to patients in our Code of Ethics, but it never presents this Code to the public, so that the section is about as useful to the community as if written in Chinese characters. Who will deny that a patient should confide the care of himself and family to one physician, when we know that he who has become acquainted with the idiosyncrasies or habits and dispositions of those whom he attends is more likely to be successful in his treatment than one who does not possess this knowledge. Yet how often is the apothecary first consulted, and the patient prescribed for over the counter by one who perhaps has never seen him!

So far have the public departed from their duty, as wisely laid down in this portion of the Code, that, instead of confiding to one physician, it is not uncommon for two or more to be in attendance in the same family,—each ignorant of the fact, that the patient seeks a "head or nervous doctor for his brains, another for his eyes or ears, and another for the womb, etc., until, as has been jocosely said, the public have now a doctor for every portion of the human frame except the navel." Admirable as are the sentiments published in the Code on the "duties of patients to their physicians," it must be admitted that they are and will be of little practical utility until the profession, through its County and State Societies, finds some judicious mode of scattering broadcast among the public the information intended for its especial benefit. This subject is one worthy of your consideration, and its discussion cannot fail to elicit some wise plan of accomplishing this important object. Suppose, for example, our "Committee on Hygiene and the Relation of the Profession to the Public" suggest a plan, and that our County and State Society approve and forward it to the American Medical Association for its action, and then each member circulated this part of the Code among his own patients under the authority of the Association, would it not benefit the profes-

* Collected Works of Dr. Latham, vol. i. p. xxii., New Sydenham Society.

† Code, Art. II. Sect. 2.

sion, and warn the public against the selfish and ignorant pretensions of quackery in its various forms? May we not hope that some consideration will hereafter be given by the profession to this subject, and that our County Society may show its power by calling the attention of other bodies to a measure that involves the life and comfort of every citizen?

In another portion of the Code we read, under the "duties of the profession to the public," "that as good citizens it is the duty of physicians to be ever vigilant of the welfare of the community, and to bear their part in sustaining its institutions and burdens." This is also one of those portions of the Code that appear to be one-sided in their application, and has entailed so serious a wrong on the medical profession that it is the duty of medical societies to attempt to remedy it. Aware of the benevolent spirit that characterizes our profession, the public have not hesitated to impose on it "heavy burdens, and grievous to be borne," until at last there is some evidence of a revolt, and of a disposition to keep professional benevolence within reasonable limits. The abuse of medical charities is a subject now engaging attention at home and abroad, and as one of the committees of this Society have recently participated with other societies in a public meeting to discuss the subject, we may soon hope to hear of some plan that will create a change in public sentiment on this question. At the meeting alluded to it was stated that "it may be justly concluded that two hundred thousand of our citizens annually receive gratuitous medical aid, and that in London, in 1873, one million two hundred and eighty-eight thousand persons received gratuitous advice and medicine."* This surprising amount of medical charity has long attracted the attention of thinking men in England, and has from time to time been the subject of special notice by well-known writers. Dickens, the graphic delineator of so many admirable life-like portraits of human infirmities, especially as exhibited in the trials of the poor under the poor-laws of English towns and villages, was not insensible to the conduct of medical men in his own country in connection with this subject.

In his "Household Words" he describes, with admirable detail and a beautiful contrast of the charitable spirit of the profession as compared with that of the representatives of the moneyed public, the actions of physicians and so-called guardians of the poor. Under the head of "Medical Charities among the Poor" he says,—

"The whole mass of the poor in this country [England] is thrown upon the almost unassisted charity of the medical profession.

"No burden in any degree resembling it is sustained by any trade. The public knows little of the real position in which the sick

poor stand in reference to their medical attendants, because medical men, as a body, bear their burdens manfully, and accept the care of the poor as an incident of their calling, rarely expressing their discontent, and then oftener at the want of thanks than at the want of money. The members of the medical profession respond freely to the appeals made to their humanity, striving quietly and heartily to do their duty and make the best of their position."

Then, in order to give additional life to his picture, and contrast the benevolence of medical men with the traits shown by others, who talk loudly of their charities and their devotion of their time to the relief of the poor, he says, "Compare the action of medical men with that of others in the world,—as, for example, Mr. Souchong (the grocer), who supplies 'tea to the poor' in ounce packages, and not always in the state in which it left China; or Mr. Sirloin (the butcher), who sells them chips and fragments of meat at a good profit; or Mr. Wick (the chandler), who gets the half-penny out of the poor man's penny candle.

"These men may hold up their hands and exclaim against the hard-heartedness of the doctor, who meanly connects thoughts of the sick poor with thoughts of his own day-book and ledger. Of course, doctors are hard-hearted; Mr. Souchong, who is a poor guardian, knows it, and he says so."

Who of us, who know the way in which contracts are given out to furnish supplies to our institutions or to expend the money of cities in the service of poor-districts, can fail to recognize the truthful resemblance of this delineation of so-called charities to the poor and the noble position held by the medical profession in aiding in dispensing them?

All are now commencing to recognize the truths thus expressed by one of the most graphic writers of our age, and our medical journals at last have begun to complain of the injury done to the profession by a greedy public, whose primary idea, in their benevolent institutions, is the mean one of obtaining as much service as possible from their medical staffs at the lowest cost, or, more frequently, for nothing. Contributors to dispensaries and hospitals not unfrequently, it is said, obtain medical advice for members of their own households, as participants of their so-called charitable contributions, and hospitals have been reported as receiving twenty-five dollars per week for board and medical attendance on their patients, all of which goes into the treasury of the *charitable* institution, whilst they claim the free services of their medical staff on the plea of its charity.

As a recent journal has justly said,† "so much medical service is rendered gratuitously

* Dr. Gross, as reported in Philadelphia Sunday Times, January 25, 1880.

† New York Medical Record, vol. xvii., No. 1, p. 14, January, 1880.

by our profession that it is hard to convince some people that it is worth anything. The system of 'dead-heading' for clinical, dispensary, and hospital material has developed itself into a science that is now better understood by the patient than by the doctor." That it is *not* so understood in all its results by many doctors is apparent from their anxiety to obtain any dispensary or hospital appointment that becomes vacant, even when they know that the duties of the post can only be performed by the sacrifice of several of the best hours of the day, and this without, as they also know, the slightest emolument.

So marked is this professional tendency at the present day, that the managers of these institutions, in some instances, regret the resignation of a physician on their staff, not from the loss of his valuable services, but because it exposes them in their homes and on 'Change to the annoyance of the repeated solicitations of the candidate and all his friends, in their anxiety to secure their favorable vote for an unsalaried office.

Our Code of Ethics, with its lofty principles and benevolent intentions, has apparently misled our profession, or it has been misinterpreted by those who, whilst desirous of giving their charity to the deserving poor, overlook the fraud practised on the profession by men who are justly entitled to be classed among the rich. As the laborer is worthy of his hire, no maudlin sentiment should be permitted to rob the worthy physician of the remuneration to which his talents and education, as well as devotion of time and labor, justly entitle him, and which, if he insisted on it, he would soon receive. The public require instruction on their relative duty to the profession, and the profession owe it to themselves to assert their estimate of the value of their services by refusing to give them for nothing, or should refuse to seek offices which are not paid. Those who supply the food of patients in hospitals are fully paid; why should not those who direct the administration of their medicines be equally remunerated? The power of our organization can readily be shown if our members will give this subject their careful and judicious consideration. The abuse of medical charities, and also of medical men, is a question that should not be permitted to rest without decided action by this body.

The influence of our Society upon the humanitarian efforts of the citizens of Philadelphia has also been frequently shown during my late term of service, and has, I am happy to say, been frequently recognized by our citizens.

In the action of the "Citizens' Association for the Prevention of Vice and Immorality," the support of the Society in their efforts to preserve the morals of the young and to restrain their passions,—to prevent ante-natal murder and punish its agents, as in the case

of the notorious Madame Restell,—has been freely given and most favorably received; a noted instance of the latter being the action of the Protestant Episcopal Bishop of Pennsylvania, who cordially endorsed the action of this Society in one of his annual addresses to the clergy of his diocese. In the act of incorporation of the "Society for the Prevention of Vice and Immorality," your recent president and two other members of this Society were selected by your fellow-citizens to serve as incorporators in organizing the movement, so that they might have the benefit of the extended experience obtainable through the action of the Philadelphia County Medical Society. Another humanitarian and sanitary measure in which our Society has participated was shown by the reports of our Committees "on Hygiene and the Relation of the Profession to the Public," "on Infant and Adult Hygiene during the Summer Months," "on Drainage and the Effects of Garbage," and "on Myopia in our Public Schools," in which over seven hundred and forty-five pupils, or one thousand four hundred and eighty-nine eyes of school-children, were examined and prescribed for, an average time of twenty-six minutes being spent in the examination of each pupil.*

In presenting to the profession the new views of Professor Brown-Séquard on Paralysis and Convulsions, as so ably described by himself in his lectures before this Society; in the laborious and careful revision during several months of the Pharmacopœia of the United States for the convention that is to assemble next May in Washington, this Society ably performed a part of its mission. In the obtaining of the necessary legislation at Harrisburg to compel registration of the regular members of the profession and protect the public from the evils arising from quackery this Society also took an active part.

It may prove instructive to some to know, in this connection, that this registration of physicians is but the revival of an old practice, and to note how the same vices and virtues show themselves to the student of history as being reproduced or revived, with occasional modifications, in every age. Those who regard the acts of the public and the medical profession at the present day, on this and some similar questions, as novel and progressive, will perhaps be surprised to learn that the same spirit of registration and the same efforts to destroy the many-headed Hydra of Quackery, whether in or out of the profession, are plainly recorded by the historian as far back as 292 B.C., and that the old Romans, whilst exhibiting their æsthetic culture, were also watchful of the development of proper means of obtaining the "*mens sana in corpore sano*." Thus, Pliny, at the begin-

* Dr. Risley, Chairman, in MS.

ning of the twenty-ninth Book of his Natural History, says,—

"Under Nero the medical profession became organized; an upper class of physicians, called the *archiatri*, being created, among whom the body-physicians of the emperor (*archiatri palatini*, or court physicians) and the *archiatri populares* held distinguished ranks. The former were among the most important of the court officials, their title being *spectabiles*.

"After the time of Antoninus Pius, a certain number of the *archiatri populares* were appointed in each town. They were elected by the citizens, and examined by the college of the *archiatri*. They received a salary from the city, besides being exempted from all taxes, in return for which they were bound to attend the poor gratis.

"Medical men were at this period classified as physicians (*medici*), surgeons (*medici vulnerum*) or *chirurgeons*, and oculists (*ocularii* or *medici ab oculis*), the names of the oculists, etc., of the empress Livia being found in her columbarium.

"Besides these, we hear of dentists, specialists for the diseases of the ear, lady physicians [now called women doctors] for the diseases of their own sex, midwives, and assistants (*intralipite*), whose chief business was to *rub* patients with medicinal ointments." Now we call them "rubbers," and their practice "massage." "Mention is also made of the numerous sellers of 'Oriental salves' [now called Pond's Extract, etc.], who added their share to the grand system of quackery that then prevailed in Rome."

The ancient Egyptians had also a custom, which, perhaps, may yet be adopted by the so-called "progressive people" of the nineteenth century, but which, strange to say, has as yet attracted but little attention, though described in Sir Gardner Wilkinson's great and well-known work on "The Manners and Customs of the Ancient Egyptians," viz., the cure of diseases that baffle the skill of the physician, and where all hope of recovery is lost, by offering (*ex votos*) in the temples a certain sum for success in the cure. "In the case of children, this sum was settled by giving a weight of silver equal to one-half or one-third of the weight of a portion of the hair shaved off the child's head for this purpose." What a wide field of usefulness is thus opened to such anxious mothers as deem themselves wise in their generation, and advocate in every place the great advantages possessed by homœopathy over all other means of treating disease, and especially those of children, in consequence of its simplicity and safety, as well as its adaptation to their innocent tastes! What a charm exists in their expression of its being only "sugar of milk"! Who can doubt the benefit that would result to both mother and child from this Egyptian sacrifice of curly locks? How attractive is

the simplicity of this plan of cure! and how well is it calculated to relieve maternal solicitude in reference to the wisdom of "the old-school practice," and the securing of the child against the errors of the allopathic system with its nauseous drugs!

But I fear to weary you by a too extended reference to these points, the fact being patent that the complaints of physicians against quackery, and the tendency of the public to exhibit its credulity, have existed in every age. The so-called novelties and improvements of the present day in medicine, and particularly in that subdivision of it designated as specialties, are but a recoinage of the words and customs that were generally recognized many centuries since. Ancient specialists, like those of 292 B.C. as just described, did not, so far as is known, progress as rapidly or claim as much skill in diagnosis as the moderns, if we can credit the wonderful examples recently noticed. Thus, a writer in the *New York Medical Record* ludicrously portrays the tendency of some writers to boastful experiences, and the tendency of special studies, when not well regulated, to develop an exaggerated estimate of individual ability, in comparison with the general knowledge possessed by him who is *only* a physician.

"I found," says this imaginary specialist, "that by attaching an ophthalmoscopic mirror to the extremity of a speculum I could direct the light to the internal os uteri, and then discovered that a very large majority of obscure cases of female disorders were traceable to a slight abrasion of the mucous membrane (or endometrium) at this point. . . . I related five cases in point by way of illustrating this condition. . . . By devising an apparatus that extended around the buttocks and into the hollow of the back, I succeeded in securing spermatozoa in any part of the Fallopian tubes. By this means I reported that I was able, by examining the spermatozoa microscopically, to determine whether or no the patient's husband was predisposed to cancer, phthisis, impotency, neuro-asthenia, or insanity.

"In nine hundred and thirty-six cases which I had the opportunity of examining for suspected cancer, I found eighty-five per cent. had a granular degeneration of the tail of the spermatozoa, corresponding in position to the fourth dorsal vertebra. The result of these cases was so surprising, that I next attached a microscope to the mirror, which, when advantage was taken of the hydraulic pressure of the bladder, could be so operated that the tissue of the ovary could be examined *in situ*. . . . At the risk of being considered too enthusiastic in my claims for the utility of this instrument, I described other cases to which it was adapted, and stated that with slight modifications it could be used for the rectum, urethra, ear, throat, and with the Fallopian attachment had been employed in exploring

the Eustachian tube and viewing the tympanum from the inside."*

Whilst we see in this amusing delineation of a so-called discovery a distant resemblance to some real reports of cases and instruments of a wonderful character, may we not be advantageously warned against the tendency of a practice in specialties that will make dangerous progress towards evil results unless counteracted by the common sense and decided action of the general practitioner, in opposition to the implied superiority of the specialist over his supposed ignorance?

Special studies, especially with the aid of the microscope, have greatly advanced the cause of general science, and in the departments of histology and pathology have certainly promoted the progress of sound treatment in all diseases. The evil alluded to is the result, not of that true scientific investigation that indicates "a love of science for science' sake," but is the evidence occasionally noted in specialists of ignoring the knowledge and acquirements of those who are proud of being designated simply as physicians or the students of nature (*φύσις*), men who recognize that the disorders of any one organ, whether eye, ear, brain, or womb, are closely dependent on the healthy or unhealthy action of the whole system. So generally is this fact recognized among physicians, that it is difficult to understand how any specialist can judiciously treat a single organ, unless perfectly able to treat those of other organs at the same time.

The evils likely to arise from a division of the science of medicine into numerous specialties are those developed by the undue importance attached by some specialists to particular symptoms. If benefit is to be derived by the public from the present fashion of specialties, it can only be wisely obtained by them in consultation with the general practitioner, or with him who has heretofore been known as the "family doctor." In connection with the question of the advantages and disadvantages likely to arise from too great prominence being given to specialties in our Society, I commend to your notice Section 3, Article XI. of our By-laws, as showing that this Society, in the arrangement of the business of a conversational meeting, recognizes the benefit to be derived from the increase of the general knowledge of our members, by inviting "the relation of individual cases, the details of personal observation, the exhibition of morbid specimens, etc.," as well calculated to lead to the study of general questions in medicine, and, by the discussions such histories naturally create, to exhibit the knowledge and experience of all present at the meeting. The paper of the evening, no matter what its subject might be, or what discussions it might lead to, was not intended to occupy all the time,

but the relation of individual experience was evidently asked for, in order to post all present on the prominent disorders of the day, or the peculiar views of the debaters in regard to either the treatment of disease or general hygiene. On the occurrence of an epidemic, or as a premonition to members of the prevalence of a certain class of cases, such histories are eminently more useful than specialties in any form can possibly be to the general practitioner, or those who form the bulk of our members.

The advantages derivable from an organization like that of this Society have also been illustrated in a marked degree during the last three years by the incorporation of our Mutual Aid Association, the adoption of its well-digested by-laws, and the promulgation throughout the city and throughout the State of the opinions and wishes of our members in connection with a charitable movement that has for its object the relief of sick members, as well as a provision for the support of the families of such as are left in want by the death and other misfortunes of their natural protectors. Charity, that great virtue that hides a multitude of sins; charity, the virtue that never faileth, has been so fostered and directed under the judicious influence of our County Medical Society, that already it promises to take a firm root on our affections, and yield to our destitute brothers, at some not distant day, precious and abundant fruit. Although but a comparatively brief period has elapsed since its foundation, the Society already numbers among its members those whose energy and benevolence insure its success.

With the preliminary steps that led to this organization within the circle of our own Society, and with the contributions of those whose charity led to the creation of a fund that will eventually relieve the wants of our sick members and protect the widow and orphans of those who die without being able to make proper provision for their support, most of you are familiar. It has been the painful duty of your late presiding officer to recognize distressing cases of decided poverty among the families of some who were once the active members and bright luminaries of this Society, and the response made by many of our members to his suggestions for the relief of such cases has been one of the most agreeable results attendant on the performance of the duties of his office. Experience has proved that such a mutual aid association must be restricted and regulated within the bounds of our own Society. It has been already shown that great care is exercised in the election of the members of our County Society, and without this or similar protection any aid association would be exposed to endless difficulties in escaping the claims of those who wished improperly to avail themselves of the benefits derivable from such a charity. Now, when none but those who

* New York Med. Record, vol. xvi., No. 15, p. 357.

have passed the scrutiny of our Board of Censors can be eligible as members of the Mutual Aid Association, we may reasonably hope to escape from the evils with which similar associations in other places have had to contend.

Under the restraints and limits of our carefully digested By-laws, it is hardly possible for your charitable donations to be expended except on worthy objects. The judicious watchfulness of the Committee on Benevolence of the Association renders it very certain that every case of want will be thoroughly investigated, with a tact and delicacy of feeling that will save the sensibilities of the wives and children perhaps of some now present. Look to the past records of the membership of this Society, and let no one pride himself on being beyond the possibility of needing for his dear ones the fostering care of his brother-members when he lies buried beneath the verdant sod.

How pleasant it is to think that with the trifling sum paid now, with but little self-denial, to constitute each one of you a life-member of the Mutual Aid Association, we are likely to accumulate a fund that in a short time may shelter, as is now done in New York, seven or more widows and as many orphan children until they are sixteen years of age! Ninety more subscribers of fifty dollars each will give to our Association the means of disbursing immediately such relief as may be promptly required by any of our sick members whose limited incomes make them dependent on their daily services to others. Can we reasonably doubt that it will be contributed, when we think of how many, in the near future, will bless each day the sacred spirit of charity evolved by the organization of our Mutual Aid Association? How pleasant to anticipate that each evening the daily prayer of the widow and fatherless of some now among us will be uttered in thankfulness for the forethought and benevolence of the Philadelphia County Medical Society!

Gentlemen, it needs no fancy to color this picture, it needs no eloquence to impress each one of you with the obligations that such a charity imposes. Every father will understand, without being told, the incalculable blessings that may spring from this recent organization of our professional benevolence. To you who hear me, as well as to every member not present this evening, belong the sacred duty and pleasure of seeing that the funds of this noble charity are not permitted to fail. Small though the seed may now be, it is cast upon a warm and generous soil. It rests in your hearts, and, if tended by your wise and judicious care, must eventually develop a tree of benevolence, that, like the mustard-seed of the sacred parable, shall gather under its sheltering branches many an orphan child or widow now warmed and

cherished under the paternal roof. May God bless the enterprise and give it a success commensurate with its merits!

Last, though not least, among the advantages derivable from the organization of our County Medical Society, has been the establishment of our library. All of you must have sometimes felt the necessity for easy reference to a good medical library; and though many of our members have access to other collections, yet I think all will hail with pleasure the additional facilities offered by our Society, in a collection that promises to present an opportunity of consulting the older authors. The present age of books—like the poor—is always with us, and the so-called novelties of the day attain a size that is often reduced by the reference to the writings of a past generation. As our library will grow chiefly from the donations of our members from their private collections, it will eventually be specially useful by furnishing treatises connected with the past in medicine. Already the wheel of fashion is revolving towards the practice of the eighteenth century, and the student who wishes to be posted in humoral pathology, and the necessity or advantages of blood-letting in certain cases, or on the former opinions of quarantine, and the etiology and treatment of yellow fever or diphtheria, will have to read such volumes as constitute the bulk of our library.

To the diligent efforts of our librarian we are indebted for the arrangement of, and facility of access to, these books; and it only remains for our members to second his interest in the library to insure its attaining an extended number of volumes.

In conclusion, gentlemen, permit me to urge on you increased efforts to illustrate and magnify the benefits derivable from our organization as a County Medical Society, by showing the kind of work it can accomplish when judiciously exercised. You all know the value of the papers constantly presented at our conversational meetings through the labors of our directors. The increased attendance on each evening shows that they are widely appreciated. Remember, however, that though the number of our members is large (two hundred and seventy-five), they constitute only about one-third of the regular physicians of Philadelphia, and that there are, therefore, very many who do not participate in the benefits derivable from our organization. Many of these can give as well as receive instruction, and all can participate to a greater extent than is now done in our discussions.

These discussions are often especially instructive, by furnishing the experience and varied opinions of the speakers, all of whom endeavor to contribute to the general fund of information elicited by the paper of the evening. As the subject of each paper is announced on the printed call for the meeting, every mem-

ber should come prepared to participate in its elucidation. It remains also for our members, with a true missionary spirit, to urge upon their professional friends not only the advantages derivable, but also the obligation entailed on every physician in Philadelphia to contribute his mite to that fund of information which, as displayed in our published Transactions, shows that the Philadelphia County Medical Society is fulfilling its mission in contributing to "the knowledge of all subjects pertaining to the healing art, and that it thus labors to lessen human suffering."

Gentlemen, I thank you for the courtesy extended to me in the unusually long period with which you have seen fit to honor my humble efforts to maintain the dignity and usefulness of our Society. If I have been able to accomplish this in any degree, it has been mainly the result of the hearty responses made by the members to the suggestions or efforts of him who, in now retiring from the chair, leaves the helm of the Society in experienced, vigorous, and capable hands.

ORIGINAL COMMUNICATIONS.

PUERPERAL SEPTICÆMIA, CHIEFLY AS OBSERVED AT THE PHILADELPHIA HOSPITAL.

Read before the Philadelphia County Medical Society, December 10, 1879.

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THE following paper is based chiefly on cases occurring in the Philadelphia Hospital between January 1, 1870, and December 1, 1879, a period of about ten years. They are arranged in the books of the White Obstetric Wards, under the headings of Puerperal Fever, Septicæmia, Pyæmia, General Peritonitis, Pelvic Peritonitis, Pelvic Cellulitis, Metritis, Phlegmasia Dolens, and Erysipelas. The sum total of these cases is one hundred and eighty-one, of which there have been eighty-eight cases of puerperal fever, eight cases of septicæmia, two of pyæmia, thirty-five of general peritonitis, five of pelvic peritonitis, twenty-eight of pelvic cellulitis, six of metritis, six of phlegmasia dolens, and three of erysipelas. I have studied all recorded cases of these diseases, because I believe that nearly all such conditions occurring in the lying-in woman either originate in septicæmia or are modified in some part of their progress by septic influences. That puerperal inflammation and fever do often originate in traumatism can-

not be doubted; and I further believe that such fever and inflammation may progress to resolution and recovery without the patient necessarily becoming septicæmic. Yet if the traumatic inflammation becomes more than moderate in degree, the probability of septic poisoning becomes great, and especially if the patient is an inmate of a lying-in hospital. Another reason why I have placed these cases together is my belief that if a puerperal patient has a traumatic inflammation, the septic poison rapidly develops in her genitals, and though she herself, by reason of the non-absorption of the poison, may escape septicæmia, yet the septic material may be transferred from her genitals to another lying-in patient, and this one may have puerperal fever or septicæmia though the original patient has not had such a disease.

I believe the cases occurring in the hospital bear me out in saying that whenever a series of cases of severe traumatism occur in the lying-in wards, following such there occur cases of pelvic cellulitis, of general or of limited peritonitis, of metritis, of phlegmasia dolens, which cannot be explained by the character of the labors, and which must have originated in some extraneous cause. This cause often is, as I believe, the septic poison that has been generated in other patients that have been ill with traumatic inflammation. And, moreover, when there are occurring cases of such inflammation, I am always apprehensive that soon well-marked and virulent cases of puerperal fever will appear; and, if I am not mistaken, such a sequence is the rule. I will go further, and state that I believe that I have seen a most fatal endemic occur in the wards because of the poison generated in a fatal case of traumatic puerperal peritonitis. To illustrate, by reference to detailed statistics and to a period when I had individually an opportunity of observing the cases: the record shows that in January, February, and March of 1874 pelvic cellulitis and pelvic peritonitis were of unusual frequency, twelve cases of the former and five of the latter being so registered on the ward books, and a number of milder cases were not recorded. Of those first occurring, nearly all seemed due to the severity of the labors, while most of those occurring in March could not thus be accounted for. During these three months but one case of puerperal fever occurred. Then came in

April six cases of puerperal fever. At other times, too, I have noticed puerperal fever to be preceded by cases of limited pelvic inflammation. Again, there have appeared in the wake of puerperal fever cases of seemingly, but only seemingly, local inflammations. Endemics of puerperal fever have not disappeared abruptly, but rather by gradations through cases of pelvic inflammations, themselves of successively diminishing intensity. Thus am I led to think it would be a mistake not to study such cases in connection with accepted cases of puerperal fever.

In addition, however, to the possibility of the septic poison originating in the decomposing organic matter liable to exist in the genitals of puerperal women, there are other sources in perhaps every large general hospital. I feel confident that the poison is at times conveyed from patients in the ward for diseases of women, from the surgical and from the venereal ward, and doubtless, also, from the post-mortem room, despite carefully-devised preventive measures.

The atmosphere of the hospital contributes to the development of septicæmia, especially during the months when closed windows and doors aid in preventing thorough ventilation. It will be noticed that forty-seven cases occurred in the winter and ninety-five cases during the spring months, and mainly, I will add, in March and April: *i.e.*, one hundred and forty-two cases out of one hundred and eighty-one occurred at times when ventilation was least effective, and most of these in early spring. The pregnant women are in the hospital from about two to four months prior to confinement, and have by the end of winter become enfeebled and their systems vitiated by the hospital atmosphere, so that those who go into confinement in early spring have not vital vigor sufficient to resist the inroads of a blood-poison or to withstand the effects of a traumatic inflammation. I believe the septic poison may enter the system through the lungs, being conveyed by the atmosphere, especially if it contains considerable septic poison, as is most apt to be the case at the close of winter. I have seen pregnant patients who, by their facial expression, slight yellowness of skin, moderately increased temperature, feeble and irritable pulse, and general weakness, have suggested to me the probability of septic poisoning, and have seen

such patients presenting serious symptoms of septicæmia early after normal deliveries.

The table shows seven cases dying within three days after delivery, and most of these were probably septicæmic before delivery, though at least two of them died of shock and of rapidly extending traumatic inflammation. There were three cases of cutaneous erysipelas, beginning about the genitals after confinement, and these three recovered. Several times erysipelas occurred in the infants of puerperal fever patients; in some the erysipelas appeared about the head, in others about the umbilicus. This occurrence of erysipelas in association with puerperal fever constitutes one of the arguments going to establish the near kinship, if not the identity, of the poison of erysipelas and that of puerperal fever.

There were also co-operating causes. Seventy-one of the patients affected were under twenty years of age,—at a period of life when the undeveloped sexual apparatus, and especially the small pelvis, render traumatism in labor often unavoidable. In this connection it will be noticed that the majority of the cases of "general peritonitis" were patients under twenty years of age. A further co-operating cause is to be found in the fact that one hundred and thirty-two of the women were confessedly single,—illegitimately pregnant,—and most probably a number of those professedly married were, in fact, single, so anxious often are they to conceal their shame. The great majority of all the patients confined in that hospital are single women. Mental anxiety, mental depression, and unhappiness are certainly powerfully co-operating causes in producing a number of puerperal diseases, and among them, though indirectly, septicæmia. The ostracism which in this country awaits the illegitimate mother, and cannot be shaken off, is a terribly depressing agent. Fright, too, in times of endemics often insures and hastens the fatal result. Two of the most rapidly fatal cases I have met with were in two intelligent women, who recognized in the chill, in the thermometric record, and in the remedies directed, unmistakable evidences of the scourge being on them. In less than thirty minutes, frightened as they were, they passed from a state of quietness into one of uncontrollable violence, and died within forty-eight hours, with the usual lesions.

Again, there were one hundred and thirty-six primiparæ and only forty-five multiparæ. Primiparæ are most liable, because of traumatic lesions. In them traumatic inflammation most frequently occurs because of dystocia, and, as I have previously stated, traumatic inflammation opens the door for septicæmia. Moreover, even in times of epidemics there is further reason for the liability of primiparæ in the greater frequency of slight or severe lacerations about the lower part of the vagina. Sepsin is rarely absorbed through an unbroken surface, such as exists very often in the vagina and vulva of the multipara. Septic poison transferred to a patient, as is the rule in epidemics, almost always enters the system through raw surfaces in the vagina or in the vulva, and these raw surfaces are rarely absent in primiparæ.

In the cases of general peritonitis there was a very large proportion of occipito-posterior positions,—eight in thirty-five cases. I think that some of these eight cases must have been dependent upon injuries sustained because of the position of the head; yet the presentation could not have been often at fault, as there were only one cross-birth and twenty occipito-posterior positions in the one hundred and eighty-one cases.

The labor in thirty-four cases extended beyond twenty-four hours. It is probable that in many of these cases, and certainly in some, the contusion of tissues and the general exhaustion incident to prolonged labors contributed in establishing the abnormal post-partum condition.

Thirty-two children weighed over nine pounds; and when a child of such weight was born of a primipara, especially if she was under twenty years of age, the disproportion of the parts must have occasioned severe traumatism.

Whenever Bright's disease existed there seemed a special tendency to inflammatory action and to septic poisoning, and if this complication occurred, a fatal result usually followed. I have seen several such cases in the hospital. Twenty-six of the one hundred and eighty-one cases were forceps deliveries; in three cases podalic version was performed, and in one embryotomy. In nearly all of these the conditions demanding interference were doubtless harmful, and rarely the interference itself. There were two cases of rupture of the uterus:

one occurred in a forceps delivery, the other in a podalic version of a shoulder presentation. The former was fatal; the latter recovered with but slight inflammatory or other serious manifestation.

During the past ten years there have been a considerable number of instrumental deliveries, some of them of unusual difficulty, and in very many, even of the latter cases, recovery was rapid. There are times in the hospital when severe and complicated labors produce but slight disturbances; there are other times when slight dystocia is followed by most serious consequences. This difference seems to me to depend upon the degree of activity of septic influences.

Of the one hundred and eighty-one cases, there were registered eleven cases of more than slight rupture of the perineum, in eighteen cases considerable post-partum hemorrhage; in eleven cases the hand was carried into the uterus to remove an adherent or supposed to be adherent placenta. These are all indirect co-operating agents in the production of septicæmia. The remedies at times resorted to for the relief of ruptured perineum and for the controlling of hemorrhage seem to me also to have been at fault. When septic influences are rife, it seems to me best that primary perineorrhaphy should not be performed; not that the operation itself is detrimental if the surfaces are accurately coaptated, but that the subsequent confinement so strictly on the back, and the necessity for repeated catheterization, increase the liability to septic infection. Lochial discharges do not escape with sufficient freedom when the patient preserves the dorsal recumbency, and in catheterization the hand or the catheter may convey to perineal or to vulvar raw surfaces, or to abrasion of urethra or of bladder, the poisonous material. It is the rule, with some at least of the visiting accoucheurs, to forbid primary perineorrhaphy when there seems a strong tendency to septic disturbances in the hospital. In controlling post-partum hemorrhage, the prolonged employment of ice, either externally, or more especially if carried into the uterus, and also the injection into the uterine cavity of such a substance as Monsel's solution, as was done in a few of these cases, seem to me to be capable of determining inflammatory action and indirectly septicæmia. The prolonged and excessive use of ergot itself in

hemorrhagic cases may, by its undoubted depressing and disturbing influences, render an enfeebled patient additionally liable to blood-poisoning. Yet it must also be remembered that the excessive loss itself of blood predisposes to inflammation and to septicæmia. I believe that in the external application of moist heat, and, if need be, the injection of hot water into the vagina, or with care into the cavity of the uterus, we have an agent for controlling post-partum hemorrhage, which, by its almost entire harmlessness and by its efficiency, should largely supplant other measures, and which cannot contribute to, but obviates, the entrance of septic poisons.

In several of the cases the children were still-born, and in such women, even if the death of the child occurred during labor, the genital apparatus and surrounding tissues having lost the stimulus to involution that is derived from lactation, inflammation seemed easily developed and septicæmia frequent. When the child has for some time been dead *in utero*, and the change known as maceration has occurred, even if the membranes have remained intact until delivery, the mother has, in several instances, shown evidences of blood-degeneration when labor has arrived, and has after delivery evinced great liability to the early occurrence of the usual inflammations of septicæmia. I am inclined to think that in such instances the maternal sinuses, especially those in or about the placenta, have received from the foetal portion of the placenta altered organic material in sufficient quantity to constitute a degree of septicæmia. Yet the frequency in such cases of adherent placenta, the necessity of its detachment by the hand in the uterus, and the possible retention and decomposition of fragments of the adherent placenta and of unusually fixed deciduous membrane, render the lying-in of such women peculiarly dangerous, and more especially so if with such conditions there is, as is often the case, constitutional syphilis of the mother.

In one instance, the membranes having accidentally ruptured in the ninth month, before labor, the foetal heart-sounds were distinctly heard forty-eight hours before labor was induced, yet the foetus and the placenta were found in a state of putrefactive decomposition, showing the rapidity with which decomposition of a dead foetus *in utero* occurs after the rupture of the

membranes. This patient became an isolated case of puerperal fever, and, though very ill, recovered.

Of the one hundred and eighty-one cases, however, there are one hundred and four in which no abnormality is recorded as having occurred during the delivery; and although doubtless the forceps were used in some instances, and the fact does not appear on the records, yet one-half of the labors were quite certainly normal ones. Most of these occurred during endemics of puerperal fever, and to most of them the poison must have been transferred from other puerperal patients. In endemics the poison is usually derived from other lying-in women; in isolated cases the autogenetic origin of the poison is more frequent.

The most serious endemic occurred during March, April, and May of 1877. During these months there occurred thirty-three cases with the recorded diagnosis of puerperal fever. Most of them were successive cases of delivery, and in not one of them is there recorded an instance of interference or of abnormality during labor. The poison in these cases was transferred in various ways from patient to patient. They were all normal deliveries, but were preceded in the wards by cases of erysipelas, and by one case of fatal traumatic peritonitis, the result of dystocia. This endemic corresponded in its general manifestations with endemics of the so-called puerperal fever seen by various practitioners in private practice, and often noticed in lying-in hospitals ever since the establishment of such institutions.

I cannot believe that in such cases the disease is, at any stage of its development, merely a local inflammation. Blood-poisoning is the determining morbid condition. Local inflammations, most marked in the genital organs and in structures in relation to them, but also not infrequently seen in tissues remote from the points of infection, are evidences of the blood-poisoning. These inflammations existed in some form in every case that came under my observation, and would, I believe, develop in all cases were the fatal termination longer delayed.

However, although in such cases the original poisoning is due to infection from a source external to the patient, I believe that in nearly every case in which the in-

flammation progresses to the development of purulent matter there are relays of infection from within the woman. Decomposing lochial discharges, putrescent degeneration of venous and of lymphatic thrombi, and purulent infiltrations are repeatedly adding new supplies of septic material to the already poisoned blood. The original poisoning may of itself be sufficiently virulent to produce death, or it may be that a fatal result would not occur were it not that these repeated instalments of autogenetic poison were themselves undermining the vital powers. And let me ask that it be remembered that these secondary poisonings may be considered as being only exceptionally due to absorption of lochial discharges; for usually by the time these become putrescent the abrasions and lacerations of the genital organs have either healed or are in a state of granulation, and granulating surfaces do not absorb the poison. The secondary poisonings are due to the entrance into the circulation of material that is the altered product of vicious inflammatory action. This fact impresses the importance of checking the disease before the formation of this material through inflammatory processes. Upon this fact, too, hinges the explanation of the great value of a special point in the early treatment of the disease, on which I shall presently dwell; and that point is the early local abstraction of blood.

Of the one hundred and eighty-one cases, sixty-one terminated fatally. All the cases of pelvic peritonitis, pelvic cellulitis, phlegmasia dolens, and erysipelas recovered. There was one death due to metritis. There were, then, sixty deaths in one hundred and thirty-three cases having the diagnoses of puerperal fever, septicæmia, pyæmia, and general peritonitis. These one hundred and thirty-three cases with different diagnoses were clearly, with the exception of two cases of general peritonitis, essentially one disease, and should all be classed as cases of puerperal septicæmia. During the past decade there were eighteen hundred and seventy-two deliveries, and following these there were one hundred and thirty-one patients having marked septicæmia, with sixty deaths,—only a little over three per cent. of the cases of confinement, but a large mortality of the cases affected. Yet I believe that not a few of the other cases should be classed under the same diagnosis, and that

thus the proportion of fatal cases would be much reduced. Of the thirty-five cases diagnosed general peritonitis there were eighteen recoveries, a remarkably favorable result.

During the endemic of the spring of 1877, when thirty-three cases of puerperal fever occurred after almost successive deliveries, there were thirteen deaths, or a mortality of about forty per cent.

Of the entire sixty-one fatal cases, death occurred in seven cases within three days after delivery, in forty-three cases from three to fourteen days, and in fifteen cases after the fourteenth day. It is reasonable to conclude that of the seven deaths occurring under three days, several were due to infection prior to labor; also that the majority of the forty-three dying from the third to the fourteenth day were infected during labor; and in the larger number of those in whom the fatal result occurred after the fourteenth day, the blood-poisoning probably occurred after delivery, and they were mainly illustrations of the autogenetic variety of infection.

The rarity of the development of a circumscribed abscess in septicæmic cases seems generally recognized, and of the one hundred and eighty-one cases I did not see a case, nor can I find one in the hospital records, of abscess of the peritoneum or of the pelvic cellular tissue. Pus often developed, but was diffused through the tissues, or was found within lymphatic vessels, or within blood-vessels, or on the free surface of the peritoneum. If pus did not form, the deposit of serum and of lymph became eventually absorbed to such an extent that there was no tumor or recognizable induration left behind. I did not see an instance of purulent infiltration of a joint. During convalescence I repeatedly saw mammary abscesses and small abscesses of the general cellular tissue. In fatal cases following normal deliveries, and of the heterogenetic mode of infection, post-mortem observation showed, in quite a number of cases which I myself saw, some considerable uniformity in the abdominal and pelvic lesions. The lesions I almost invariably observed were evidences of inflammation of the veins and lymphatics that leave the tissues of the uterus and of the vagina, the presence in those vessels of pus, and in the veins also of broken-down blood-clots; the pelvic cellular tissue was either infil-

trated with pus or with serous effusion, the uterus was large, and in a condition of oedematous swelling, occasionally its mucous lining was necrotic, more frequently swollen and softened. Ulcers with diphtheritic deposits were almost invariably to be seen on the cervix uteri, or in the lower portion of the vagina, or at times on the vulva. Peritonitis was in all cases present, though the abdominal peritoneum at times seemed but slightly involved. The peritonitis was always marked in the pelvis, though even there it seemed often of very recent development. An offensive purulent fluid not infrequently existed in the peritoneal cavity. In a few instances pneumonia, pleuritis, peri- and endocarditis were observed. Generally the lungs, liver, spleen, and kidneys were congested and softened. The blood was in a fluid condition.

Judging by the comparative appearances of the inflamed structure of the pelvis and of the abdomen, the inflammation seemed usually to have started from the diphtheritic ulcers of the vagina, and to have travelled along the vagina and the connective tissue surrounding it, involving blood-vessels and lymphatics, and extending to the uterus, ovaries, and peritoneum. Peritonitis did not seem to be the affection earliest developed. The inflammation usually extended to the peritoneum by continuity of structure, though doubtless at that time it was dependent directly upon the systemic poisoning, just as was the inflammation of remote serous membranes.

I will not refer to the symptoms that appeared in the cases of merely limited inflammations, nor of cases in which blood-poisoning became engrafted, as it were, on traumatic inflammation, excepting to say, in reference to the latter, that where the constitutional symptoms were out of proportion to the injuries received during labor, I felt warranted in believing that blood-poisoning had occurred. As, for instance, if in a case of pelvic cellulitis I found the temperature to be keeping high, from 102° to 104° F., the pulse about 130, irregular, small, and feeble, and there existed a peculiar pallor and expression, and recurring chilliness or shiverings, with marked exhaustion, I concluded that the patient was septicæmic, and at the same time I felt convinced that the other tissues were becoming involved, as, for instance, blood-vessels, lymphatics, and the perito-

neum. This extension of the inflammatory action, when associated with blood-poisoning, did not seem to produce such marked local symptoms as when such an extension occurred without blood-poisoning.

In endemic cases of puerperal septicæmia, if traumatism was not modifying the disease, I did not find a chill to be a reliable guide in determining the incipency of the disease. It rarely amounted to a distinct rigor: generally there was more or less of chilliness, sometimes with slight shiverings. The symptom often escaped the observation of the nurse, and was often not referred to by the patient unless questioned. Among the earliest symptoms was a rise in the axillary temperature, it even in the beginning of the disease often reaching 102° to 104° F. In the absence of severe traumatism and of mammary engorgement, I concluded from this rise in the temperature that the patient was attacked by the disease,—i.e., during endemics,—and I acted accordingly. Usually there was no rapid development of intense pain. A moderate degree of pain developed in the lower region of the abdomen with the thermometric rise. On pressure the tenderness was not very great. The pulse immediately rose to about 120, and the respiration to about 20 per minute. Thirst and restlessness were early symptoms. In the majority of cases these symptoms appeared between the third and the sixth day after delivery. The chilly sensations often recurred without regularity as to periodicity. As the patient grew worse the above symptoms became aggravated, the pulse 130 to 140, the temperature 103° to 106° F., respiration 24 to 30; a mental lethargy and quiet delirium appeared, the pain extended, but rarely became intense, the tenderness on pressure extended, but remained moderate, and both pain and tenderness sometimes disappeared. Tympany existed, and often it became great. Sometimes there was retention of urine, sometimes unconscious discharge of it. Occasionally moderate diarrhoea appeared, and rarely decided constipation. Vomiting was an occasional symptom. The patient sometimes lay with the legs drawn up; in other cases the limbs remained extended, the patient sliding towards the foot of the bed.

In many cases there was a peculiar flush of the face until a few hours before death. In endemic cases pallor does not seem so

often to be present as in autogenetic poisoning, as, for instance, when gradual blood-poisoning results as the sequence of decomposing adherent fragments of the placenta. The tongue, in the beginning slightly furred but moist, became dry and brownish, though to a much less extent than in typhoid fever. The lochial discharges usually entirely ceased, or at least were decidedly diminished. At times they were abundant, and were then often offensive. In severe cases the secretion of milk ceased, the breasts becoming empty and flattened. In less severe cases there was a moderate secretion of milk, and the child continued to nurse its mother. I do not think either of these symptoms to be pathognomonic of the disease, and either one may be modified or aggravated by remedies instituted. I learned to look upon the thermometric record as a most important aid in determining the incipency and progress of the attack. A more or less considerable rise of temperature not infrequently occurs about the third or fourth day after confinement, in patients entirely free from septicæmia, but in times of epidemics, in the absence of the recognition of other determining causes, a rise in the temperature warrants us in diagnosing the affection, and demands immediate treatment even in the absence of chill and pain. Thermometric observation during the continuance of the disease indicated the severity or the mildness of the attack. In severe cases, with a tendency to death, the temperature was high, with but slight evening exacerbation, and towards a fatal termination it reached 106° , 108° , or even 109° F. A temporary reduction not infrequently occurred as the result of medication, as, for instance, after the administration of quinia, but in a few hours it would rise again, especially if the attack was a severe one, and in fatal cases it ran high towards the close, despite the quinia. In favorable cases there was a gradual reduction in the temperature as convalescence was being established.

In some cases rare symptoms occurred. In two cases most noisy and active violence came on, the result of great fright. In one instance unintermitting general clonic spasm occurred on the seventh day, probably due to acute uræmia and to the unusually high temperature of 110° F. In another case there was marked tetanus

on the third day of the disease. These four cases proved fatal ones.

I should like to speak more extensively of the significance of the different symptoms, did a proper limit to this paper permit. I am forced also to curtail what I should like to say in reference to the treatment, and to the prophylaxis. I will, however, speak of measures which I have myself tried, and will give my own conclusions. The earlier cases under my own care were treated after the method recommended in that superb work on puerperal diseases by Prof. Barker, and I believe the great majority of the entire number of cases were so treated. A future observation led us to modify that treatment. It was the epidemic of 1877 that occasioned this change.

The treatment that then seemed to me most satisfactory in its results was as follows. My standing directions then were, that as soon as the incipency of the disease was perceived in the rise of the temperature, in the increased frequency of pulse and of respiration, in the restlessness of the patient, with or without a chill, with or without abdominal pain and tenderness, immediately the following measures be instituted: the patient was to receive at once morph. sulph., gr. ss, and quiniæ sulph., gr. xv, and immediately, whether day or night, the leecher was to be summoned, and over the lower region of the abdomen sixteen foreign leeches were to be applied, and the bleeding following their bites to be encouraged until from sixteen to twenty ounces of blood were taken. Then a warm poultice was to be applied to the abdomen, and the patient to be given an opportunity to fall asleep. On awakening, the bowels were freely moved by enema. The patient was placed on a mild diuretic and febrifuge mixture, containing liq. ammon. acetat., and she was restricted to liquid but nourishing diet.

Subsequently, at intervals of twelve hours, if the temperature was above 101° F., eight to ten grains of quinine were given at a single dose, at intervals of twelve hours, and she was kept comfortably under the influence of morphia, to relieve restlessness as well as pain. Stimulants, in most of the cases, I preferred not giving until after the second day of the attack, and then, according to the degree of exhaustion, from three to twelve ounces of

whisky a day. Vaginal injections of warm water impregnated with a small quantity of carbolic acid were to be used in each case. If the lochia were offensive, the same fluid was thrown into the uterine cavity; but the latter was to be done only by the resident physician. These injections were to be used once or twice daily. Unless there was rapid development of general peritonitis, constipation was secured, but usually for not longer than forty-eight hours, when the enema was to be resorted to. If general peritonitis was developing, constipation was allowed to continue. If slight diarrhoea appeared, it was only held in check, not absolutely and suddenly stopped. My main reliance then was on local abstraction of blood, warm poultices to the abdomen, with warm disinfecting injections into the vagina or into the uterus, quinia in antipyretic doses during high temperature, morphia in sedative doses, liq. ammon. acetatis as a diuretic, and stimulants when depression appeared, and in amounts according to its degree. Vomiting was rarely troublesome, except when due to medication, and was usually relieved by small quantities of cold milk and lime-water.

The one remedial measure I have here mentioned that will probably meet with the most criticism is the abstraction of blood in a disease acknowledged to be due to septicæmia. But let it be remembered that I advocate its use in the heterogenetic variety of the infection, not when blood-poisoning has occurred as the gradual result of absorption of septic material originating in decomposition of the lochia or of portions of placenta, or of sloughs of the soft tissues. It is in the class of cases occurring usually in endemics, then, that it will prove, it seems to me, of most value, leaving out of consideration inflammation due to traumatism during labor. This local loss of blood has seemed to me to prevent the pelvic inflammation reaching such a degree of development as to be productive of pus and of putrescence. If this effect is secured, the patient escapes the additional dangers connected with the secondary poisonings to which I have referred. When the application of leeches is made after the calmative effects of half a grain of morphia have been secured, the extreme nervous disturbance at times following their applica-

tion is obviated. It is only in the very incipency of the disease, however, that I would resort to the abstraction of blood. It is only *then* that it can be of benefit; later it must prove detrimental. I prefer this local loss of blood to general venesection, because there is associated with it the maximum of pelvic depletion and the minimum of systemic depression.

Although the number of cases under my own observation in which this measure was resorted to was not great, yet I was so much pleased with the results in individual instances, and in the aggregate also, that I am ready to resort to it in other cases.

During the endemic of 1877 my colleague, Dr. Walker, and myself took charge of the wards when the disease was at its height,—*i.e.*, on the 1st of April. Prior to that date there had occurred fourteen cases, with nine deaths. After that date there were twenty-nine cases, with four deaths, and one of these four fatal cases was not leeches. Nearly all of the remaining twenty-eight cases were leeches, and with three deaths. About fifty per cent. of the cases not leeches died, while not more than twelve per cent. of those leeches proved fatal. This percentage is not absolutely exact, because of the absence of accurate detailed clinical histories of all the cases, but it is, I believe, a fair statement of the case. The difference in the mortality was, I think, due to the difference in treatment, especially to the abstraction of blood, although I am bearing in mind and desire to give sufficient weight to the fact that other measures, both preventive and curative, were instituted, such as the removal of the pregnant women to and their confinement in other buildings, and the change of nurses, and, for a period of time, of resident physicians. It may be said that the cases appearing towards the close of the endemic were less virulent than those in the beginning of it. But the disease continued to appear in such a virulent form that it was deemed best to advise the pregnant women to leave the hospital, and the endemic came to an end not so much by a gradual diminution in severity as by an absence of confinements.

The sulphate of quinia seemed to do good in its evident influence on the temperature, and was administered also because of its believed tendency to check

incipient inflammation. The tincture of veratrum viride I found unsatisfactory in the frequency of severe vomiting following its administration, and when this effect was produced the patient seemed decidedly the worse for it.

Prophylaxis is of paramount consideration, and should consist of measures antiseptic in nature. These measures arrange themselves under two heads: first, such as will prevent the conveyance to the pregnant or puerperal patient of all poisons, *septic* in character, from sources *external* to the woman, as from the post-mortem room and the dissecting-room, from all kinds of suppurative wounds, from erysipelatous patients, from those ill with diphtheria and scarlatina, and most probably from typhus and other transferable or communicable diseases.

The second class of measures are none the less important, and often are equally practicable, though not always so. These measures should consist in the warding off of all depressing agents during pregnancy and during the puerperal period, such as confined atmosphere and crowd-poisoning, mental depression, the effects of Bright's disease and of constitutional syphilis, and various other degenerating influences, the avoidance as far as possible of all traumatism and of hemorrhage during labor, the invariable and thorough removal of all products of conception, the limiting of the intensity of traumatic inflammation, and the use of vaginal or of intra-uterine disinfecting injections, wherever, either because of the surroundings of the patient or because of the condition of the patient herself, there is reason to apprehend blood-poisoning.

In conclusion, I would submit the following propositions:

1st. Puerperal fever and puerperal septicaemia are dependent upon essentially the same poison, and this poison originates in decomposing organic material.

2d. This poison may be developed in the woman, or may be derived from sources external to her.

3d. Puerperal fever may be transferred from one puerperal patient to another.

4th. Patients suffering with traumatic puerperal inflammation are thereby rendered more liable to internal infection.

5th. The poison is especially prone to develop in lying-in patients suffering with traumatic inflammation, and from them

other patients may be infected, though they themselves may escape septicaemia.

6th. In patients suffering with autogenetic infection the symptoms vary greatly, according to the absence or to the presence and degree of traumatism, and according to the special mode of the autogenetic infection.

7th. The symptoms of patients suffering with external infection observe a considerable degree of uniformity, as do also the pelvic and the abdominal lesions.

8th. The treatment of the autogenetic cases must vary greatly, for the same reasons that the symptoms vary.

9th. The treatment of heterogenetic cases is more uniform, and should consist usually of morphia as a calmative, of local abstraction of blood, of quinia in antipyretic and antiphlogistic doses, of warm, moist, external applications, of warm disinfecting intra-vaginal or intra-uterine injections of a mild diuretic, of stimulants according to depression, and of liquid and highly nutritious diet.

I cannot close this paper without referring to the present infrequency of endemics of puerperal fever in private practice. This is due, I think, to the general belief in the communicability of the disease through the physician and the nurse.

The days of the Localists have passed by, and with the light thrown by modern scientific medicine on the nature of puerperal fever, on its cause, and on the mode of its production, it is to be hoped and to be expected that the days of private endemics are also to be reckoned only in the past. Indeed, the time is approaching when the disease will be seen, even in large hospitals, only in isolated cases.

PRIORITY IN THE ANÆSTHETIC USE OF THE BROMIDE OF ETHYL.

BY R. J. LEVIS, M.D.,

Surgeon to the Pennsylvania Hospital and to the Jefferson College Hospital.

IN a recent article, in the issue of this journal of January 17, I mentioned the claim of Dr. Turnbull to priority in the production of anæsthesia in the human subject with the bromide of ethyl. In his brochure on anæsthetics he distinctly makes this claim in these words: "*I was the first to experiment with this ether on man.*" Whilst feeling no doubt that Dr.

Turnbull was unconscious that he had long been preceded in such administration, there are clear and decided records of the fact.

Mr. Nunneley, of Leeds, England, demonstrated the anæsthetic properties of the bromide of ethyl on some of the lower animals in the year 1849, and in 1865 he used it frequently on patients undergoing surgical operations. The records of these facts occur in the "Transactions of the Provincial Medical and Surgical Association" for 1849, vol. xvi. page 206, and as a part of the "Proceedings of the British Medical Association," *British Medical Journal*, August 19, 1865, page 192. It seems also probable that a chemical substance with which chemists have been familiar since its discovery in the year 1827, and the anæsthetic properties of which have been so long known, has received the practical attention of others of the many investigators in the domain of anæsthesia.

In the volume first referred to is an article on "Anæsthesia and Anæsthetic Substances generally," by Thomas Nunneley, Esq., F.R.S., etc., Senior Surgeon to the Leeds General Eye and Ear Infirmary, etc., in which are recorded a series of experiments with the anæsthetic effects of the bromide of ethyl on the lower animals. These experiments, the results of which have been confirmed by some more recently made, agree in demonstrating the rapidity of the action of this agent and the speedy recovery from its impression.

After recording his observations with a number of anæsthetic substances, he says, "The bromide of ethyl is a pleasant, rather fragrant ether, not of a very penetrating smell, is sweetish to the taste, at first rather insipid than not, but afterwards it is more pungent. It possesses very considerable anæsthetic power. Its inhalation does not appear to be unpleasant. When not used in large quantities, the animals soon recovered from a condition of complete insensibility, without any disagreeable symptom; and when given, as in No. 98, in a full dose, the creature sank down, without moving a muscle, merely from its weight, into a state of the most profound anæsthesia, within one minute after being put into the jar. The fact of respiration continuing at all during fourteen minutes in such a condition, shows

that this fluid is more manageable than some others."

In reference to the choice of anæsthetics, Mr. Nunneley, in the same place, remarks, "The bromide of ethyl is a safe, pleasant, and effectual anæsthetic; but, inasmuch as it does not possess any such qualities as to render its employment more advantageous than some other substances, the very great cost of it will, unless this can be materially reduced, entirely prevent its use. One manufacturer would not prepare it for me under one guinea an ounce."

Happily, the impediment of high cost referred to does not now exist, and with an increased production, stimulated by the demand which is, I believe, destined soon to occur, the price of the article will be much lower. An analysis of the results of Mr. Nunneley's experiments on the lower animals with a great variety of anæsthetics would seem to indicate that the bromide of ethyl has qualities which are not equalled by any other substance; and such an inference may well be drawn from his own guarded statements.

In regard to the record of Mr. Nunneley's application of the anæsthetic powers of this substance to the human subject, the following paragraph from the journal referred to will be sufficient: "Mr. Nunneley showed to the members two substances, the bromide of ethyl and the chloride of olefiant gas, which for some time past he had used as anæsthetics. He stated that he had not lately performed any serious operation, either in private practice or at the Leeds General Infirmary, without the patient being rendered insensible by one or the other of these agents, each of which he believed to possess important advantages over chloroform. They were among the many analogous bodies experimented upon by him, and were favorably mentioned in his essay upon Anæsthesia, which was published in the Transactions of the Association for 1849. At that time the difficulty and cost of their manufacture were too great to allow of their being commonly used. This difficulty had, however, been overcome, and, should their use become general, they can be made at a cost not exceeding that of chloroform, if not at less. They both act speedily, pleasantly, and well. The patient might be kept insensible for any length of time while the most painful and prolonged operations were being performed. No disagreeable

symptoms had, in any case, resulted from their use. They were prepared for Mr. Nunneley by Mr. Squire, of Oxford Street, London, from whom they might be obtained."

In the claim to priority in the demonstration of the anæsthetic properties of the bromide of ethyl and its application to the prevention of human suffering, I deem it of importance to make the correct award, as my continued experience with it in the surgery of a large general hospital and in private surgical practice impresses me with the conviction that it is the best anæsthetic known to the profession.

THE PERMANENT REMOVAL OF SUPERFLUOUS HAIRS BY ELECTROLYSIS.*

BY W. A. HARDAWAY, A.M., M.D.,

St. Louis.

N EARLY two years having elapsed since I presented my paper on the permanent removal of hair to the American Dermatological Association, and various opinions, favorable and unfavorable, having been expressed as to the merits of the procedure, I desire to redirect the attention of the profession to this valuable and practical method of relieving a most disagreeable deformity. I am the more inclined to do this since a further experience has fully justified me in all the claims made for the operation at that time, especially in regard to the permanency of the effects obtained. A brief history of the operation and the method of performing it may not be uninteresting.

The first to suggest the feasibility of destroying the hair papillæ by electrolysis was Dr. Charles E. Michel, of St. Louis, who confined his operations, however, to the relief of trichiasis and distichiasis; but it occurred to me that the electrolysis would prove equally serviceable for the removal of superfluous hairs on the face, particularly in women, by whom the dermatologist is very frequently consulted in that regard. Piffard, in his work on Skin Diseases (New York, 1876), suggests the same operation for the treatment of hairy nævi, and Fox has recently contributed a well-written and commendatory paper on the same subject.

The method of procedure now adopted

by me, and believed to be the most satisfactory under all circumstances, is as follows. A No. 13 cambric needle is attached to any convenient handle, which latter is connected to the negative wire of a galvanic battery; a moistened-sponge electrode is connected with the positive pole. Under a strong lens held in the left hand, the patient being seated in a reclining-chair, facing a good light, the needle is entered as nearly as possible into the hair-follicle; after this has been accomplished, and not till then, the patient is told to approach the sponge (positive) electrode to the palm of the hand. The needle is not withdrawn until a slight frothing is observed around its stem, showing that the electrolytic action has been fully developed; but, to avoid shock, the sponge electrode is first released by the patient, the needle being removed subsequently,—being exactly the reverse of the initial steps.

I always leave the hair *in situ*, as it is a guide for the introduction of the needle, the instrument being entered alongside of it, besides being an immediate guarantee of the success of the operation; for if the hair comes away with the very gentlest traction of the depilating forceps, a point always to be tested at once, we know that the papilla has been destroyed; but if force is required for its extraction, it is a sign that the follicle has not been properly entered. I have rarely known the hair to regrow when this test had proved successful. By observing this simple rule, one is enabled to know at the time the success or non-success of his operation. If the hair does not come out with the feeblest traction, I reintroduce the needle time and again until it does: so that it is possible to make each electrolysis an almost absolute certainty as to permanency of result. With the larger number of hairs one introduction of the needle generally suffices for destruction; in some instances, however, the follicle does not run continuously with the apparent direction of the external portion of the hair, but diverges in one direction or another, thus making the entrance into or near it a matter of difficulty. In such cases the direction of the follicle must be sought for by repeated attempts. Frequently, when the follicle has been accurately penetrated, the fact is evidenced by the twistings of the hair as the needle is pushed in.

Under a strong lens (one- or two-inch)

* Based upon a paper read before the American Dermatological Association, August 27, 1878.

it is not difficult to introduce forcibly the needle directly into the follicle; but this is not absolutely necessary, as the requisite destruction occurs if the instrument is in its immediate neighborhood. For the purposes of the operation I generally employ about eight cells of a freshly-charged galvanic battery. Each electrolysis occupies but a few seconds, the time occupied being in proportion to the number of elements used; but it should be remembered that the pain experienced bears the same relation. It may be well to say here that the amount of pain felt differs in different patients and also according to the region attacked, and that, while it is by no means trivial, it is not unbearable, and a tolerance seems to be established after a few sittings. The immediate effect of an electrolysis is to produce an urticarial wheal around the mouth of the follicle, with a certain amount of congestion and peri-follicular exudation; in a few hours afterwards the circumscribed congestion of the tissues disappears, leaving small papules and pustules at the point of operation, which in turn leave behind them minute red cicatrices, which may remain visible for some weeks. For this reason, where the hairs are numerous, as upon the upper lip, I do not take out more than ten or twelve at a sitting, generally making the operations a week or more apart. Where there are but few hairs, situate on a less prominent region, all of them may be removed at the same visit. Minute scars are most apt to occur when it has been found necessary to introduce the needle a number of times for the same hair; but even on the lip the most marked cicatrices are not noticeable to the naked eye after a few weeks.

Like all other operations of a delicate nature, this one requires a certain amount of skill and tact only to be had by some experience in its performance; but fortunately the manipulations are easy and readily acquired, thus placing it at the disposal of any one possessing a good galvanic battery. I regard a powerful pocket- or hand-lens as an indispensable adjunct to the procedure: indeed, it is difficult to understand how it otherwise can be performed with satisfaction to the operator.

After repeated trials, I have come to the conclusion that a needle of the size referred to above (a No. 13 cambric) is best suited to all cases, causing the least local disturb-

ance at the time, and the smallest amount of scarring afterwards.

While it is possible to remove even very small, downy hairs, such growths scarcely ever amount to a deformity, and their destruction entails so much annoyance and labor that I rarely ever make the attempt; but the *forte* of the operation is in the permanent removal of stiff, beard-like hairs occupying prominent regions. The long, robust hairs on moles are readily destroyed, and often the mole is made to disappear at the same time.

At this writing I have just finished with the case of a lady who was the subject of a moustache that was plainly visible many yards away. The operation has extended over a number of months, with the fortunate result of leaving the lip free from its obnoxious ornamentation and without apparent blemish as regards cicatrices.

It is scarcely necessary to add that the aim of the operation is the destruction of the hair papilla, so that the regrowth of the hair shall be prevented; and it only remains to say that an abundant experience, now running back a number of years, has amply demonstrated the permanent and successful results of this method.

TRANSLATIONS.

THE RELATIONS BETWEEN ABSORPTION BY THE SKIN AND ALBUMINURIA.—O. Laszar (*Chl. f. Med.*, 1879, p. 821; from *Virchow's Archiv*), having partially depilated dogs and rabbits by means of sulphide of calcium, rubbed the animals with croton oil over the prepared areas, with the result of arousing intense eczema and consequent albuminuria, which lasted several days, until death ensued. The kidneys after death were found to show no signs of inflammatory change. If, on the contrary, the subcutaneous connective tissue were excited to inflammation while the skin itself were spared, which was best managed by subcutaneous injections of *five per cent.* turpentine emulsion, the urine contained no albumen. From this it would appear that not the inflammation of the skin, but the absorption of the croton oil, was the cause of albuminuria. Petroleum (kerosene) —TRANS.) rubbed into the skin caused the urine to exhale a peculiar odor and to contain a resin-like substance. Repeated inunctions with kerosene gave rise to the

presence of peptone, whilst albuminuria was finally produced by repeated applications. In the latter stage desquamation of granular epithelium took place from the kidneys.

Microscopic examination of the kidney shows that within a few hours after the application of the kerosene the interstices and epithelium of the organ are filled with innumerable globules, as are the capsules of the glomeruli and the urinary canaliculi, which are enlarged. The same globules in large quantity, suspended and within the cells, are found in the serum of the blood, the fluids of the tissues, in the liver, lungs, and other organs, but especially in the subcutaneous cellular tissue, into which they have probably penetrated through the hair-follicles. The same infiltration of the entire body may be caused by rubbing in oil or cod-liver oil. These indifferent oils and fats pass through the renal epithelium without doing injury, while the latter is injured so soon as irritating or poisonous materials (croton oil, chromates, kerosene, etc.) are excreted in a concentrated form.

A great part of the disturbances which are caused by varnishing with injurious matters (among which linseed oil must be counted because of its resin) are thus explained. The nephritis of scarlet fever may be explained by supposing that the infectious material which causes the exanthem acts injuriously upon the kidneys during its elimination.

The absorptive capacity of the skin must therefore be exercised only in the case of such matters and mixtures as meet with no hindrance from the fatty material in the ducts of the glands. [The well-known fact of the absorption of digitalis infusion, however, is against this view.—TRANS.]

A NEW MODE OF TERMINATION IN HEPATIC CYST.—At the recent meeting of the French Medical Association, at Montpellier (*Gaz. Hebdom. de Montpellier*, 1879, p. 138), M. Arles related the case of a woman of 78, who, after suffering for some time with a large tumor of the right hypochondriac region, together with fever, bilious vomiting, want of appetite, diarrhoea, etc., passed by the anus an enormous cystic sac like an hydatid cyst. After the expulsion of this cyst the patient's abdomen resumed its ordinary size and her health was rapidly re-established. M. Arles thinks that there was an hydatid cyst of the lower surface of the liver,

which first opened into the intestine and was then itself passed by the same route.

SPONTANEOUS DISAPPEARANCE OF AN ENDEMIC CO-HEREDITARY GOITRE IN A CONSUMPTIVE TWENTY-THREE YEARS OF AGE.—Féréol (*Ann. des Mal. de l'Oreille*, etc.; *Cbl. f. Med.*, 1879, p. 591) saw a young man whose mother and sister suffered with goitre, and who himself was the subject of such a tumor the size of two turkey's-eggs, which was growing continually larger and larger. Having been attacked by phthisis, with cough, weakness, colliquative sweats, etc., so that he was obliged to stop work, he began to observe a decrease in the size of the goitre, which diminished so rapidly that at the end of fourteen days nothing more could be seen of it. The lung-trouble went on, however, from bad to worse.

ACUTE CARBOLIC ACID POISONING BY ENEMATA.—Praetorius (*Cbl. f. Chir.*, 1879, No. 49; from *Berliner Klin. Wochens.*) gives the case of a woman of 45 who suffered from diarrhoea which diet and opium had failed to check, and in whom the great intestine was irrigated by a quarter litre of one-half per cent. solution of carbolic acid. Tinnitus aurium, giddiness, and faintness immediately ensued, although the injection was passed. The woman's condition slowly improved after the intestine had been washed out with warm water. The symptoms of poisoning lasted two hours. The diarrhoea was cured.

XANTHELASMA OF THE LARYNX, TRACHEA, AND BRONCHI IN A CASE OF HYDATID CYST OF THE LIVER.—At a recent meeting of the Société Anatomique (*Le Progrès Méd.*, 1879, p. 942) M. Brault showed specimens from the autopsy of a case of hydatid cyst of the liver when xanthelasma palpebrarum had been observed during life. Striae of xanthelasmic tissue were found in the mucous membrane of the air-passages, in addition to those observed on the skin.

INFLUENCE OF THE NERVES UPON THE PIGMENT-CELLS OF THE FROG.—E. H. Bimmermann, in a dissertation of which an abstract will be found in the *Centralblatt f. Med. Wissen.*, 1879, No. 31, says that the centre of color-change in the frog lies all along the medulla and spinal marrow. It shows many analogies with the centre governing the changes in lumen of the vessels. There are also centres of color-change in the skin itself; and this is regulated only by the central system.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 14, 1880.

EDITORIAL.

THE COMPARATIVE INFLUENCE
OF THE PROFESSION IN ENGLAND AND AMERICA.

IT is probable that most of our readers have been both interested in and amused at the outcry raised across the water by the remarks of our London correspondent, Dr. Fothergill, and have been thoroughly convinced of the truth of his statements by their effects: the paper bullet that has not a charge of truth behind it rarely produces such result. So far, we have editorially stood aside and allowed the combat to go on undisturbed; but, as it has occupied as much space as it is worthy of, it seems only proper to close the debate.

It should be clearly understood that the question is not concerning the worth of the medical profession of Great Britain, but concerning the recognition of this worth at home.

Last summer the editor of this journal spent some little time in London, under circumstances the most favorable for meeting with the profession, and found, as he expected, that in culture, practical skill, and gentlemanliness the London profession is unsurpassed anywhere. Nevertheless, there was left an impression, as deep as it was unexpected, that the social position and the influence of the medical profession in England are much below what they are in this country.

The first physician met in London was a well-known man,—the medical attendant of some of the most exalted personages of the realm,—who immediately began talking about the profession. "We doctors!

why, we are the very scum of the earth! If we attend my lord to-night, it is not to be expected that to-morrow he should know us on the street. We are only a sort of body-servants, after all." Of course this was talk; but it was talk which welled out of a bitter fountain within.

Another most surprising thing was the tone of awe in which the treasurer of the hospital was spoken of by the medical staff, as well as the evident joy occasioned by the reception of an invitation to his garden-party. Here every doctor under forty years of age in a hospital staff feels himself a little above his hospital manager; after forty, however, he is apt to value men of business as his equals.

It is hardly necessary to multiply such personal experiences in order to show the difference in the position of the profession in the two countries. The contrast is plain in the results of effort. Wherever the American medical profession really determines to accomplish any reform within its province, to obtain proper government aid for any project, or to combat any attack upon its privileges, it is, so far as our experience leads, universally successful. The English profession is much better organized than is the American, but it seems very often to fail in its utmost endeavor. The anti-vivisection agitation shows plainly the difference. We all know the amount of effort put forth by the English profession to prevent the passage of the Vivisection Acts, and the result. In our own State an effort no less determined than the English agitation was made by a well-organized popular society to secure oppressive legislation, but it was hopelessly beaten by two physicians, who were empowered to present themselves as the representatives of a single local Philadelphia medical society. Scarcely a tithe of the power of the profession was put forth.

It cannot be said that our legislators are wiser, our people more sensible, than those of their own race in the mother-

country, but simply that the profession has more influence and power here than in England.

Some of the causes of this difference are very apparent; others lie deeper, but their discussion must be left for our next issue.

THE report of the Supervising Surgeon-General of the Marine Hospital Service for 1880 contains but little that requires editorial comment. We note with pleasure the continued honest interest in and endeavor for the sailor class, though we suppose most persons will smile when they read, "The physical examination of seamen and a local registration of the abandoned women on shore would do for syphilis what the enforced introduction of lime-juice has done for scurvy,—practically eliminate it from the list of diseases to which sailors are liable." American commerce may be limited, but sexual commerce is hardly limitable, and we suppose that there are even yet some American sailors who occasionally get beyond the beneficent sway of the Marine Hospital Service.

THE *Boston Medical and Surgical Journal*, true to its past history of unrest with its dress, appears in a new form. If Dame Rumor be trustworthy, in the Hub of the Universe female influence is supreme, and it is possible that this influence has become so subtle and powerful as to impart its own elements to the masculine ways of thinking. Certainly our shelves upon which the bound volumes of the *Boston Medical and Surgical Journal* rest, present a sad array of irregularity and inequality. It really makes no difference what the shape of a single number of a medical journal is, but this continual change is a nuisance, which fortunately is very rare, and which we sincerely hope will not become more common.

LEADING ARTICLES.

THE AUDIPHONE AND ITS PRACTICAL APPLICATION.

THE audiphone was invented by Mr. R. S. Rhodes, of Chicago, who, being himself deaf, experimented by placing a watch between his teeth and afterwards at the end of a rod held against his upper teeth, and finally perfected the instrument he now offers to the afflicted public.

The audiphone possesses the property of collecting sound-vibrations and conveying them to the teeth, from which they are transmitted to the cranial bones and auditory nerve. The acoustic principle involved in the construction of this instrument is the familiar one based upon the superior power possessed by solid bodies of transmitting or conducting sonorous vibrations, and which brings vividly before us those experiments with the tuning-fork, the watch held between the teeth, and the "lovers' telegraph," all of which serve to recall our first lectures upon popular science.

When in use, the upper edge of the instrument is pressed firmly against the anterior surface of the superior incisors, allowing the upper lip to rest upon the diaphragm, and the deaf person is then ready to listen. If the eye-teeth can be used, they generally give the best results.

False teeth may also be used, especially if they fit tightly; should they not, however, they may be made to do so by pressing the lower teeth against them. Those, then, to whom the audiphone is a boon, should look well to the preservation of their front teeth, and if the natural ones are too far gone to use as directed, the roots may, in many instances, be utilized by having false teeth set into them. The handle of the audiphone should be held lightly, and the lower teeth should not be pressed against the diaphragm. Nor should it be held between the teeth. Furthermore, it should not be pressed against the upper teeth too forcibly, thus bending or curving the instrument more than it is already bent by the cord. It must be borne in mind that in all cases the vibrations of the upper edge of the disk impart to the upper teeth the sound-waves, which are transmitted through the teeth and cranial bones to the auditory nerve. *Entirely dependent, then, is this novel instrument upon the condition*

of the auditory nerve, because in direct proportion to the inherent power of this nerve—independent of the external and middle ear or acoustic apparatus—is the influence which this appliance will exert over the hearing power.

The instrument is of no value to the absolute deaf-mute, who can, indeed, never be made to hear, for we might as well expect a person born without eyes (anophthalmos), or blind from total atrophy of the optic nerves, to see.

The term deaf-mute should be qualified by some such word as partial, semi, or total: to the public there are no degrees of difference understood by the term "deaf-muteism." Using the term "deaf" according to its usual vague signification, we can say that the audiphone is of but little service to the majority of those who are deaf. The successful cases are comparatively few when we consider the whole number of deaf persons. If the term "deaf," however, be understood to mean profound deafness, *i.e.*, hearing power only for loud voice close to the ears,—assuming the auditory nerve to be normal,—then the audiphone may be expected to be of avail. Deafness due to the various forms of catarrhal disease of the throat, Eustachian tubes, and middle ear, with thickening of the membrana tympani, and perhaps involvement of the external auditory canal, will be improved by the audiphone, *provided the hearing power for ordinary conversation be reduced to a minimum.* So also where profound deafness is owing to purulent inflammation of the middle ear, from scarlet fever, syphilis, measles, etc., the membrana tympani and ossicles have been destroyed, be there sclerosis of, or continued slight or profuse discharge from, the tympanum, the audiphone can be successfully applied. Deafness caused by direct implication of the auditory nerve, and resulting from the malignant forms of scarlet and typhoid fever, cerebro-spinal and other forms of meningitis, syphilis, old age, trauma (concussions), consanguinity, and hereditation, is usually known as "total," and all efforts to restore such, so far as treatment or any form of audiphone is concerned, must be futile.

Proficiency in the use of the audiphone requires practice, and those who for a long time have not heard ordinary conversation, and who are accustomed, wholly or in part, to interpret sound by the

movement of the lips of the person speaking, may not distinguish the words of the speaker when first using the audiphone, though the sound of these words be distinctly heard. Mr. Rhodes, being well aware, doubtless through experience, of the fact that, when those who have impaired hearing know what to expect, they always hear twice as well, makes the following valuable suggestion as a method of practice that will enable many such to rely wholly upon sound:

"Such persons should request a friend to read aloud, while they (the listener) should carefully observe the words (as spoken) in a duplicate book or paper. When this is properly done, the deaf person will be surprised with what distinctness every word is heard by the use of the audiphone. And in this way they can educate themselves."

Furthermore, we must not lose sight of the fact that profoundly deaf persons are easily pleased, and any means which, even to a degree, will enable them to hold actual converse with their fellow-beings will be eagerly grasped and thoroughly appreciated. For instance, if a deaf mother can, with the audiphone, hear her child cry or speak for the first time, she cares not for the tone, or whether even she can understand its childish prattle, so long as she hears it at all.

Audition will be improved by the audiphone in but few of the many deaf persons who enlist the services of an aurist, and the disappointments of those whose hopes to hear once more are stimulated by gossip and the press will far outnumber those who can boast of improvement.

Since the advent of the audiphone in this city we know of four or five cases in which its success has been complete.

The new acumetre of Politzer, as well as the old-established tuning-fork test, the watch between the teeth, a sheet (about one foot square) of thin celluloid, vulcanite, or ferrotype metal, aspen, ash, or poplar wood, bristol-board, papier-maché, or sized paper, will in every case enable us to decide whether the audiphone or its principle can be successfully applied.

The majority of so-called "born deaf-mutes" are rarely absolutely deaf, but are possessed of varying although slight degrees of hearing power. The army of absolute deaf-mutes fills its ranks from those who have lost their hearing through

direct implication of the auditory nerve or inner ear.

In teaching "Bell's System of Visible Speech, or Lip Reading," now almost universally employed, the audiphone must in some cases prove a valuable instrument to assist in the education of the *semi-deaf-mutes*, although Mr. Joshua Foster, the able superintendent of the Pennsylvania Institution for the Deaf and Dumb, assures me of his want of faith in the audiphone, even as a means of assisting in the education of the pupils under his charge. The tests which we made, with two of the young ladies who were thought most proficient in the use of the audiphone, were most unsatisfactory, and the voice of Mr. Foster, which had been used in testing the instrument, was almost gone, because the sonorous vibrations could not be felt by the pupil unless the speaker's tones were stentorian. When the pupils' eyes were covered they could not read our lips, and were entirely at sea.

Instrumental music, with its varying sounds and harmonies, as conveyed by means of the audiphone to the profoundly deaf or semi-deaf-mutes, awakens a pleasurable sensation, as manifested by their gesticulations and facial expression.

The opera or concert audiphone is said to possess double power; but most of those who are successful in the single disk appliance can with it hear conversation and concert equally well.

It is the best adapted for semi-deaf-mutes, not only because the sound received is of greater volume and more distinct, but also because the voice of the semi-deaf-mute, when spoken between the disks, is very considerably intensified, and therefore the more distinctly heard by himself.

The *Dentaphone* is an instrument similar to the audiphone, and based upon the same acoustic principle, but constructed more after the plan of the telephone, and is made by the American Dentaphone Company, of Cincinnati. The person using the dentaphone simply holds the instrument in his hand, in any convenient position, with the tooth-piece between the teeth and the open side of the receiver facing towards the speaker. The silk conducting-line connecting the receiver with the tooth-piece should be kept moderately tight, and may be shortened or lengthened to suit the convenience of the person using the instrument. Artificial teeth, for this

instrument especially, should fit firmly. The dentaphone can easily be carried about the person, and, judging from our experience, compares most favorably with the audiphone, than which it is less costly.

C. S. TURNBULL.

CORRESPONDENCE.

LONDON LETTER.

THE storm in a teapot which the editor of the *British Medical Journal* raised by selected extracts from my letters, and his free comments thereupon, did not subside for some weeks, and was the subject of much conversation in medical circles in Christmas week. Opinions varied, of course, and a number ran off on the false scent the said editor gave them. Others, however, recognized the bias in the remarks, and thought for themselves; and as one well-known member of the profession, who, some few years ago, was a country doctor himself, remarked to me when we discussed the subject, "It would not have mattered a rap if it had not been true." I am not peculiarly sensitive to adverse criticism, but it is not in human nature not to resent personal attacks of an offensive character, and to be accused of writing a "really monstrous production" is certainly offensive, and loses nothing from the prominence given to the attack. As an answer to this, allow me to reproduce the following letter, written to me by a stranger, a university graduate, now residing in one of the most celebrated health resorts on the southern coast:

"DEAR SIR,—Allow me thoroughly to endorse what you say of the miserable position accorded in England to country practitioners and their wives in your recent letter to the *British Medical Journal*. I write to you now direct, because I wrote to that journal a letter 'seconding' your views. That letter the editor, with editorial impartiality, has not published, but has given place, in to-day's number, to *three* which uphold a contrary view. I wish that the rising generation of medicos knew as much as I do of the misery of country practice from a social point of view, and I believe your experience (which quite tallies with mine) is by no means exceptional. I fortunately had the means of escape, and am now practising happily and contentedly in a town where there are some educated, well-bred people with whom one can associate on terms of equality, and I have always found that one is sure of a good reception and generous appreciation from such. But, in the country, *with very few exceptions*, the squires and parsons and their wives are simply ill-mannered and offensive, the gauge recognized being, not a person's qualities or at-

tainments, but the number of his acres, or the amount of his tithe-roll. These social Yahoos were in a majority; and I should defy any man to retain his self-respect and be comfortable under the studied insolence of people to whom accident gave the power to be offensive. Men in our profession are, unfortunately, very much at the mercy of whatever society they may be among, and if that happen to be mainly composed of 'the country snob,' *à la* Thackeray, the better read the medical man is the more will he be disliked and insulted, and the more keenly will he feel the injustice of rural social ethics, —ironically termed 'Christian.' Pardon a long letter from a stranger, who, however, thoroughly appreciates your remarks."

This letter bears on its face the stamp of a keen remembrance of a personal experience by a man who held a good position, professionally and socially, before he entered the West-country village where he had this unpleasant experience, and who now is well satisfied and in harmony with his environment. Furthermore, let us see what a correspondent says whose letter does appear. After designating my description a "caricature," he concludes his letter, "But there is some truth in Dr. Fothergill's description of the English medical position. In Ireland and Scotland a doctor is esteemed for his profession; in England he is esteemed for his personal qualities. The reason is obvious. The personal misconduct of many practitioners, the keeping of shops for the retail of pennyworths of castor oil and 'sweeties' by others, and the giving of advice with a supply of medicine for fourpence by graduates in medicine and surgery, so combine to lower and degrade the medical profession in England proper that it is to me a matter of astonishment any social respect is paid to any of us." Such is the deliberate written opinion of a man taking the other side. The editor closes the correspondence on the "Social Pariahs of the Medical Profession"—a term which is not likely to die soon, and which has caused no little dictionary-opening—as follows: "This little escapade must not be taken too seriously. No doubt Dr. Fothergill only meant to emphasize some particular type which had struck his attention, and in doing so yielded to the temptation of over-drawing the picture and generalizing it. We have felt the injustice as strongly as any of our correspondents; but it would not be kind or fair to Dr. Fothergill to treat this as more than a lapse of the pen and a temporary error of judgment." After having placed me in the most objectionable light possible, and having used some very strong expressions in a very prominent portion of the Association's journal, it is, no doubt, kindly meant by Mr. Hart to let me drop so gently; and his explanations as to my mental processes and their working are interesting, though what

authority he has for them I individually do not know. In my opinion, his imagination has been playing tricks with him all along in the business, especially when he allowed letters to appear in which the writers left the subject-matter entirely for a wanton and utterly unprovoked attack upon the medical men of the United States, who are held in universal respect for their enterprise and their devotion to their profession; for where else are to be found medical men who, on the same scale, leave lucrative practices for considerable periods in order to study and add to their power of usefulness to their fellow-creatures? If it were not for the spirit of bitterness which has been diffused into this squabble from the first comment to the attack upon the profession in America, the correspondence would have been instructive as to the social position of the profession amidst English-speaking people; as it is, however, it threatens to become a source of considerable irritation. The statement which is allowed to appear one week, that in the United States "one is puzzled to tell a legitimate practitioner from one who holds a five-pound bogus degree from the self-styled 'University of Philadelphia,'" is repeated the next week, in the correspondence he publishes, as—"it is difficult, unless from personal knowledge, to tell whether an American doctor is a legitimate physician or a quack." Whether these statements be true or false must be left for American editors to settle; but it strikes me that when Mr. Hart felt so keenly the "injustice" of my making remarks upon my fellow-countrymen, he might have refrained from allowing aspersions to be cast upon the medical men of another country. As to the "injustice" of what appeared in my letter, I have yet to learn that to describe an existing condition is to create it, as was assumed. And perhaps in the future the profession in England will be perfectly satisfied with the position accorded to it, and we will read no more complaints in the medical journals, but learn, to the surprise of some of us, that the position of medicine here is all that could be desired; that there is no new Medical Bill required, and that the position in the services is perfectly satisfactory; that the medical officers of institutions are not subordinate to nursing sisterhoods, and that even doctors' wives in the country receive that social attention which they deserve, but which I have been gibbeted for saying that they do not always get. As regards the facts of the controversy, I may employ the language of Oliver Wendell Holmes: "Besides, many of the profession and I know a little something of each other, and you don't think I'm such a simpleton as to lose their good opinion by saying what the better heads among them would condemn as unfair and untrue?"

The causes of *organic changes in the heart* are of the deepest interest to the profession.

The accurate diagnosis of the ruin worked is a matter of little interest to the patient unless it lead to action, in relief or retardation of the downward course. Where little or no relief can be afforded to the individual, something may be learned which may be useful to others. At the last meeting of the Harveian Society a paper was read on "Anæmia as a Cause of Heart-Disease," by Dr. Goodhart, of Guy's Hospital, a sound pathologist and a rising physician. His views were corroborated by Drs. James Pollock, W. H. Broadbent, and Pearson Irvine: so they are entitled to the confidence of the profession. Dr. Goodhart has found a considerable amount of valvular disease, and especially mitral stenosis, which is not developed by rheumatic fever or scarlatina, but which takes its origin in anæmia. He related four cases where the patients were severely depleted by recurring hemorrhage, where disease—i.e., structural changes—followed in the heart. One was a young woman 23 years of age, where repeated hemorrhages occurred after a miscarriage. The heart's action became violent and cantering, and subsequently a bruit was developed at the left apex. She sank, and at the autopsy the heart was found to weigh eleven ounces, and to be the subject of structural change in its muscular fibre. This change, which is one of degeneration, is described as one of "tabby striation,"—that is, of unequal degeneration; but Dr. Goodhart said the changes seen under the microscope were not sufficiently definite to warrant the term "fatty degeneration" being applied to the decay. Consequently he preferred the term "tabby striation," as describing the change without saying that it was a fatty metamorphosis. In bringing forward his views, he said the subject was not novel, that Dr. Pearson Irvine had written on the same subject some time previously. The association of fatty degeneration of the muscular structure of the heart with idiopathic or pernicious anæmia has been demonstrated in the wards and the dead-house of La Charité, Berlin. Professor Ponfick some years ago described a number of such cases, chiefly occurring in young women. One of these cases the late Professor Traube gave me an opportunity of examining. This patient was a young woman, who was of waxen hue, with very shallow respirations, the heart's impulse being scarcely perceptible, while the first sound was almost entirely lost. But in these cases the heart-decay is part of the general systemic failure, while in the cases described by Dr. Goodhart the heart-changes were unaccompanied by structural changes elsewhere. In life it is found that the heart's impulse is diffused, and the ventricular dilatation goes on until the mitral valve leaks, when a systolic murmur is heard at the apex. This condition is described by Dr. George Balfour, of Edinburgh, as "curable mitral

regurgitation." If appropriate treatment be adopted, the dilatation of the ventricle is reduced, and with it the size of the mitral ostium, until the valves are once more competent to close the orifice on the ventricular contraction. That such results can actually be attained no one now doubts who has had much experience. When, however, this condition of dilatation with regurgitation is continued, then, sooner or later, valvulitis is set up, partly from the friction on the opposing valve-surfaces, partly the effect of the regurgitating current. This change in the valves is communicated to the endocardium proper, and endocardial thickening results, which, at times, passes on to acute endocarditis. Such changes, he said, were not uncommon in the "gouty heart." Acute endocarditis, though spoken of as associated with chronic renal disease or Bright's disease, is very rare, except as a sequel to chronic endocardial change. He recognized that form of mitral valvulitis which I have described as found along with the gouty heart, and which, like the aortic valvulitis, is the result of high arterial tension throwing an abnormal strain on the cardiac valves. But whether such mitral valvulitis is more common among women the subjects of chronic Bright's disease, who are usually anæmic, and where dilatation is blended with hypertrophy of the walls of the left ventricle, or in men, where there is pure hypertrophy as a rule, with a florid complexion, remains to be proved by further observation. He went on to say that mitral stenosis was comparatively common in women and children, and believed that usually it was associated with anæmia, when not the result of rheumatic or scarlet fever. Dr. Pearson Irvine said that acute hemorrhage often led to acute dilatation of the heart, with the muscular and valvular changes described by Dr. Goodhart. In chronic anæmia the main symptoms complained of were usually those due to cardiac dilatation. He thought the addition of digitalis or belladonna to the chalybeates prescribed of much practical utility. Dr. James Pollock said he had long held the doctrine put forward, that anæmia led to cardiac dilatation and then to mitral disease. Dr. Broadbent agreed with the view propounded, and thought that in anæmia rest was very essential, and that iron should be accompanied by digitalis in order to reduce the cardiac dilatation. Mitral stenosis was common in women from anæmia. Hemorrhage was often followed by dilatation of the heart. Dr. Goodhart, in his reply, said that the practical value of the inquiry into the subject is its bearing upon treatment. Too commonly, in out-patient practice, cases of anæmia are treated lightly and in a routine manner, and so much mischief is allowed to go on which might have been averted by appropriate treatment. He said that in many cases iron must be given in very much larger doses than those in common use, and be combined

with other tonics in order to avoid the cardiac dilatation which was apt to ensue.

The whole subject is one of extreme interest, as anæmia is a disease which is certainly on the increase. If, as these authorities state, cardiac dilatation with mitral disease as a common sequel is a frequent result of mal-nutrition from anæmia, then anæmia is linked with more serious consequences than it has hitherto been credited with, and the importance of its ready and appropriate treatment is enhanced. We all are quite familiar with the palpitation complained of by anæmic girls and women, but perhaps we have been too much in the habit of regarding it as a phenomenon of no moment, instead of an indication that the muscular walls of the heart were yielding, and consequently have not examined the heart as carefully as is desirable. That dilatation of the heart is a consequence of impaired nutrition, however produced, is a well-recognized fact; and in speaking of the production of cardiac dilatation I have pointed out distinctly that "such a condition is more common with women than men; not as anything peculiar, but as a part of the general rule that states of general or local debility are more frequent with women than men. Probably this is due to the drains upon women, not merely the catamenial flow, but the mucous discharges to which they are so liable during the inter-menstrual intervals of the mensual cycle" (The Heart and its Diseases, 2d ed.). Not only, then, is cardiac dilatation of a chronic character due to states of persistent mal-nutrition, but acute cardiac dilatation, with degeneration of the muscular structure, or changes in the mitral valve, is, it appears, a not unfrequent consequence of acute anæmia. Such being the case, it behooves us all, as practitioners, to keep our eyes open to these facts, and in cases of anæmia, however produced, in children and women especially, to treat the condition with reference to the heart. Rest in bed is the first step to be taken; then the system must be flooded with iron; and further, digitalis, belladonna, or strychnia must be added in order to prevent cardiac dilatation, or to restore the heart, if already dilated, to its normal size, or as near it as we can reach. As Dr. Pollock remarked, the subject is one for thoughtful consideration; and with this expression of opinion all will agree.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting of the Philadelphia County Medical Society, held at the hall of the College of Physicians, Philadelphia, December 10, 1879, Vice-President

Dr. R. J. Levis presiding, Dr. W. H. Parish read a paper on "Puerperal Septicæmia" (see page 237).

DISCUSSION.

Professor William Goodell approved the remarks made by the lecturer. Having been called upon for his experience on the subject presented, he premised the observation that there is one important difference between the cases received at the institution with which he was connected and that from which Dr. Parish had derived the lessons of the paper just presented; while they are alike in some respects, they differ in the fact that at the Preston Retreat only married women are received, while at the Philadelphia Hospital the patients are generally young single women. Moreover, the number of primiparæ in the latter institution is larger, and it is in just such cases that trouble in parturition is likely to occur. Therefore, in referring to his own statistics, he did not intend to throw any discredit upon those of the lecturer. There is no question that the state of mind is of great moment in advancing or retarding recovery, and this influence is especially exerted to depress the patient when confined of an illegitimate child in a public hospital.

While approving very highly of the paper, there were one or two points upon which he could not quite agree with the lecturer. In the first place, it had been stated that a woman might become septicæmic before confinement, through living in an unclean ward. In a careful use of terms he believed that it would be proper to say that the mother's blood might become depraved and poor, but scarcely septicæmic in the absence of supuration or decomposing animal fluids. Such cases in the wards, however, may readily degenerate into cases of true blood-poisoning after confinement.

In regard to the identity of erysipelas, septicæmia, and puerperal fever, he referred to some very pertinent cases which took place in the Preston Retreat. In one of the wards a woman had a well-marked attack of septicæmia, which gave erysipelas to her child; from these cases infection in the form of puerperal fever was conveyed to two other women, who died. Finally, the nurse who attended the last two cases became seriously ill from erysipelas.

In speaking of the proportion of cases of blood-poisoning, he said that in the institution referred to some fifteen hundred and three or fifteen hundred and four cases had been delivered, with fifteen or sixteen deaths in all, from various causes. One died from post-partum hemorrhage; one had a concealed accidental hemorrhage; another died from what he thought was due to the injection of perchloride of iron into the cavity of the womb,—at all events, he had never done it again. A third case died from chronic abscess of the middle ear, and a fourth from heart-disease.

There were altogether eight deaths outside of septicæmic troubles, leaving a mortality of only seven cases in over fifteen hundred cases whose deaths could be at all attributed to infectious or septicæmic influences.

Prophylactic measures are strictly enforced, and are considered of the greatest importance. As soon as a woman falls into labor, she has a warm bath for the whole body. No digital examination is made until the physician's hands have been thoroughly washed with carbolic soap and nail-brush and then lubricated with carbolated lard. The nurse also washes the person of the patient with carbolized water, and with a small sponge washes out the vagina with the same solution. After confinement, some oakum and a carbolized solution is given the patient, with which she washes her person twice a day, which is subsequently thrown away. The nurse never performs this office unless the patient is very sick. The bodily temperature is taken night and morning. When the thermometer indicates 100°, a powder is given containing morphia, gr. $\frac{1}{4}$, and quinia sulphate, gr. x, and repeated every two hours, which reduces the temperature and puts the woman to sleep.

There is another point. He had been struck with a remark made by Dr. Hodge many years ago, that the position of a woman upon her back after confinement, owing to the curve of the vagina and the swelling of the vulva, caused retention of the lochia. Upon this hint he had founded and adopted a plan which he called puerperal gymnastics. Every woman on the day after her confinement sits on a chair while her bed is being made. Then he was accustomed to use some mode of irrigation in suspected cases. It is very desirable to avoid introducing the hand into the vagina in such cases, for fear of infecting other patients. The glass nozzles of Dr. Chamberlain can be introduced up to the fundus of the uterus, if desired, without inserting the hand at all. In a case of a woman under his charge a year ago, he had saved her life by these injections. She had an exceedingly bad attack of puerperal septicæmia. She was very pale, had chills, pulse very compressible and rapid, 130 to 140, temperature of axilla 105° to 106°, when he saw her. He personally administered injections three or four times daily. He never put his hand into the vagina. The injections were always followed by a reduction of temperature. He commenced with a two per cent. and increased to a three per cent. carbolized solution; but now with his subsequent experience he would not hesitate to throw a five per cent. solution into the uterine cavity. With reference to the thermometer, he thought its daily use a valuable means of indicating the condition of the woman. But it sometimes causes unnecessary anxiety. It may run up to 100°-101°, with the pulse and general condition good, causing false alarm. In some cases these

freaks cannot be explained; in others they are connected with the secretion of the milk; but if the temperature rise decidedly on the third day it is generally due to septicæmia. It only very rarely happens that the milk fever causes any rise in temperature. Very often what is called milk fever he believed to be a mild form of septicæmia.

Another point in practice. Most obstetricians deliver upon the left side, but he never delivered the placenta with the mother upon the side. The air goes into the womb very quickly. In Sims's position there is a tendency to suck up the air into the womb by the falling forward of the viscera, and the passage of hospital air into a womb is a cause for septicæmia. This precaution of placing the woman upon her back and delivering the placenta by Credé's method, in order to prevent the air from getting into the uterus, is, of course, less important in private practice.

The lecturer had spoken of diseases of the fœtus causing septicæmia whenever the child dies, and Dr. G. agreed with him. We always see it when death of the fœtus occurs in extra-uterine foetation. We know that absorption of liquor amnii may occur, because one of the first signs of the death of the fœtus is the diminution of the abdominal tumor. The lecturer had also said that during an epidemic of puerperal fever he had had very good results from non-interference in lacerations of the perineum. Dr. G. thought this a mistake. You have a large raw surface which you close with stitches. The needle-points create new foci, it is true, but by covering the raw surface you would prevent absorption much more effectually.

In concluding, he wished to ask the experience of those present with regard to scarlet fever flush occurring in connection with puerperal fever. He had seen a case where the flush was so much like that of scarlet fever that he did not know to this day whether the case was one of scarlet fever or of pyæmia. He believed, however, that it was the latter; for a local explosion, in the shape of a mammary abscess, saved, as he thought, his patient's life.

Dr. Albert H. Smith commended the paper for its practical character, and said that its subject was the great scourge of obstetric practice, and, to a great extent, the opprobrium of obstetrics.

In regard to the relation of erysipelas with puerperal fever, the speaker could not assert that his observation had carried out the views advanced by the lecturer. In his experience simple idiopathic general erysipelas does not directly communicate puerperal fever. He had attended such cases, while also attending lying-in patients, and had never seen any cases of septicæmia resulting. He recalled a case that he had seen with Dr. Goodell, where two-thirds of the body of a woman was covered with erysipelas, not simply with an erythema-

tous blush. The patient recovered after a very prolonged illness. He was obliged to examine her repeatedly during this period, and had a large number of parturient cases under his charge at the same time, but none of them became infected. The relation is certainly not direct, as it has been considered, although from erysipelatous cases attended with suppuration the hand of the practitioner may communicate to the abraded surfaces or open points upon the genitalia septic poison which will develop puerperal fever. Erysipelas, in hospital or private practice, and puerperal fever may arise from similar conditions and apparently from the same cause. As the pus from an abscess may be carried by the surgeon's hands from one patient to another, and develop, after an operation, either erysipelas or septicæmia, so may puerperal fever be carried by the physician's or the nurse's hands contaminated by any foul matter. He failed to see any specific relation of cause and effect between these disorders, but looked upon idiopathic erysipelas as one of the essential fevers. He did not think that erysipelas would arise in the puerperal woman without a specific cause, and could not believe that if one went from a woman with typhoid fever, smallpox, or scarlatina into the lying-in chamber, one would be liable to convey anything but the specific disorder in question, and that these do not cause puerperal fever was, he thought, well established. In a case in the Woman's Hospital in this city, on the third day after confinement a rash, strikingly similar to that of a typical scarlatina, appeared, covering her whole body, as well as the fauces and mouth. There was high febrile action, frequent pulse, and very high temperature, but in no respect did it present the appearance of puerperal fever; there were none of the pelvic symptoms, nor were there present the peculiar vaginal discharges. The woman was confined a second time about eighteen months after, and again upon the third day the same condition ensued. She was very ill each time, but had no symptoms of puerperal fever.

The speaker endorsed Dr. Goodell's views concerning perineorrhaphy, as the raw surfaces are a source of septic infection. The laceration should be closed not merely for the purpose of preventing the absorption of septic matter, but in order to prevent the constitutional disturbance due to suppuration, which would take place in the course of a few days. We may have cases of pyæmic fever occurring independently of the puerperal fever, and the speaker had seen it occur on the fifth or sixth day, in cases where there were large granulating surfaces. Septic puerperal fever comes on in the course of two or three days, but this pyæmic fever appears in six or seven days, and runs the course of pyæmia. Therefore, if you can bring about the union of those surfaces in twenty-four to forty-eight hours, or about the time when puerperal fever begins,

you may save the patient a great deal of future trouble.

As regards prophylaxis, all admit it to be a matter of immense importance. Of the means proposed he particularly approved the preliminary washing of the vagina with carbolyzed water and continuing these injections every three or four hours for five or six days. Where perineorrhaphy has been performed, no injections should be made for the first twenty-four hours. If you can keep the vaginal canal washed out with strong antiseptic fluids, you will be very likely to prevent absorption. Where septic infection has occurred, he preferred Labarraque's solution (3ss to Oss or Oj), or permanganate of potassium (gr. $\frac{1}{2}$ to $\frac{3}{4}$).

Leeching the abdomen, as mentioned by the lecturer, was regarded as a sovereign remedy by Professor Charles D. Meigs, but the speaker said that he would hesitate before applying it in many cases, as few would be able to bear the loss of blood. Moreover, he was unable to appreciate the distinction of cases proposed by Dr. Parish; nor could he understand why it might be useful in cases where the poison was in every portion of the body, but not in the cases where it was confined to the pelvic organs. The speaker would have adopted directly the converse view. The results reported, however, appear to endorse the treatment. The methods of general treatment he would entirely endorse: warm applications and good, plain, nourishing food. He believed that enough stress had not been laid upon this part of the management; he had seen cases kept alive and recover after two weeks of nutrition by the rectum ($\frac{3}{4}$ i or $\frac{3}{4}$ ij every hour of milk or meat broth), when the stomach rejected everything and no medicine could be retained. Under this treatment alone the patient recovered, without any medical aid except external applications. In conclusion, he stated his belief that the value of rectal alimentation could not be overstated.

Dr. E. T. Bruen referred to a case of erysipelas in the surgical ward of the Philadelphia Hospital, which was followed by a case of malignant scarlatina in the obstetric ward, which proved fatal. This was followed by an outbreak of an epidemic of both erysipelas and puerperal fever in the obstetric wards, which required them to be closed for the time.

Dr. O'Hara believed that a family relationship existed between the several forms of blood-poisoning mentioned, and spoke of a case which, after a normal labor, developed symptoms of scarlet fever, and died in a few hours.

Dr. Alfred Whelen had seen a case of scarlet fever in a puerperal woman, with an eruption on the second day; she had all the symptoms of puerperal fever, and died on the fifth day; the baby also died. It was ascertained that scarlatina had been present in the house in another child.

Dr. J. A. McFerran observed that if any septic matter could cause puerperal fever, then it could not be identical with scarlet fever, unless we are prepared to deny that scarlatina is a specific disease. In the treatment of septic diseases he relied upon morphia and quinine, but believed that the morphia has the most effect.

Dr. George Hamilton, in referring to puerperal gymnastics, said that he was reminded of an old physician in the country near Philadelphia, who, in thirty years' practice, invariably made his patient, immediately after the delivery was accomplished, get out of bed and stand upon her feet while her clothing was entirely changed. The speaker presumed that this physician's experience had shown him that the practice was not dangerous, or he would have discontinued it; but he had never dared to try it in his own practice. It might be useful in aiding the discharge of clots, but he did not think it free from danger.

In the treatment of puerperal fever, the question of blood-letting would depend upon the condition of the patient: if she were anæmic, a few ounces of blood might cause death.

Dr. G. Wilds Linn, by invitation, spoke as follows:

After expressing his satisfaction with the general sentiments expressed in the paper and the discussion, he said that it would be proper to make some remarks upon the epidemic of 1877 of puerperal fever in the Philadelphia Hospital, which had already been referred to as being of very severe type. It arose in a very peculiar manner. He was called by the resident physician to see a woman who had been in labor for several hours. He knew very little of the history of the case, beyond the fact that the labor was a protracted one and required a forceps delivery. There was a laceration of the perineum running two and a half inches into the rectum.

The next morning the woman's temperature was 104°, the pulse correspondingly high, and extremely feeble. She was completely prostrated, and in forty-eight hours she was a corpse. The speaker was utterly unable to account for this death at the time. He thought that it might be due to rupture extending into Douglas's cul-de-sac.

Post-mortem examination showed peritonitis confined to the middle portion of the abdomen and running around in a belt three or four inches in width. There was no inflammation of the pelvic organs.

In the course of twenty-four hours another woman had high temperature, and the indications of puerperal fever; then three or four cases occurred, and others so rapidly that the blood-poisoning appeared to be endemic, and the wards had to be closed and thoroughly cleansed and disinfected.

In regard to the treatment of puerperal

fever, it had been said that during his superintendence fifty per cent. of the cases died, while during the next term only fourteen per cent. were lost. He believed that this difference could not be entirely attributed to the difference in treatment, which was leeching. The greater mortality might be explained by the fact that there is less ventilation during the winter and early spring months.

Dr. Parish, in reply to Dr. Goodell, said that he had intentionally omitted extended reference to prophylaxis from his paper, because it had already exceeded the limits, and its consideration was not essential to the question which he had wished to discuss. He had, however, gained some valuable points from the remarks made during the discussion.

In regard to the occurrence of ante-natal blood-poisoning from a dead fœtus, he would not deny that the mother's blood might be profoundly affected without septicæmia being present. In the cases mentioned he believed the symptoms were those of septicæmia. The possibility of this is held by Barker, although denied by other authorities.

Concerning immediate perineorrhaphy there is also a difference of opinion. After the edges of the wound are brought together they very often do not unite in septicæmic cases, but form a trap for discharges, where they remain in contact with the absorbing surface, which cannot be kept clean as when the wound is left open.

In regard to the cases mentioned by Dr. Bruen of erysipelas, he had noticed that they were reported in the books as septicæmia, diphtheria, and other diseases. In a case of a woman in Delaware, narrated to him by Dr. Cooper, he recalled the fact that a scarlet blush appeared on the genitals on the second day, and rapidly extended to every part of her body except the soles of her feet and hands. The eruption was very like that of scarlatina. As regards erysipelas, he could not state from his own experience that it would produce septic poisoning.

In referring to Dr. Linn's case, he believed that it was produced by several causes, and mainly by the erysipelas in the wards, and their poisoned condition and bad ventilation, which he had already referred to in speaking of the origin of the epidemic of 1877.

He had been surprised that the treatment had not been more severely criticised, as he was aware that the abstraction of blood in this condition was, in the minds of some, very objectionable. His experience in severe cases had fully warranted his recommendation. He had seen a gaseous, fluttering pulse become stronger and fuller after a bleeding. He would, however, abstain from leeching in autogenetic cases, as he had never seen one which he thought would bear it; but in heterogenetic cases the abstraction of blood is often of the greatest value. The case of Dr. Linn's, where death occurred in forty-eight hours, he

had already referred to in quoting an endemic of puerperal fever which could be traced to a fatal case of traumatic peritonitis. He fully appreciated the point raised by Dr. Linn, that there was less mortality from septicæmia because there was better ventilation in the later spring months, and also the danger was lessened by the opening of new wards. The cases reported, however, were quite as seriously ill in the new wards as in the old, and his own opinion was that by the old treatment a larger number of them would not have recovered. He believed that the abstraction of blood did good.

On motion of Dr. O'Hara, the thanks of the Society were unanimously tendered to Dr. Parish for his able and interesting paper.

F. W.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, JANUARY 8, 1880.

THE PRESIDENT, DR. S. W. GROSS, in the chair.

Case of tumor of scapula. Presented by Dr. NANCREDE.

ISAAC L., æt. 23 years, was admitted on September 24, 1879, to the men's surgical ward of the Protestant Episcopal Hospital with a large tumor of the scapula. He was a farmer by occupation, had been healthy, and his family history was good in every respect. For about a year past he had been troubled by occasional cough, which was relieved by simple expectorants. About one year ago, without any assignable cause, a small tumor of the size of a hickory-nut was noticed growing from the left scapular region, in the neighborhood of the spine of that bone. It rapidly increased in size, until at the time of his admission it measured about six inches in both the transverse and vertical diameters. No special pain was complained of, and his appearance apparently indicated robust health, although, perhaps, he was somewhat paler than a man of his type should have been.

The growth seemed firmly adherent to the scapular spine, and, being bound down by the dense infra-spinatus fascia, appeared to involve the bone still more extensively. When the removal of the growth, however, was attempted, upon September 26, 1879, it was found merely to have sprung from the lower border of the spine of the scapula, no other portions being involved, and not the slightest trace of infiltration was observed. A portion of the flaps sloughed,—probably from pressure used to arrest consecutive hemorrhage,—and the wound did not heal well, suppurating freely; but the discharge did not become offensive until towards the close of life. Two weeks before the fatal termination, he complained of pain over the left side of the thorax,

which, however, was quickly relieved by treatment. Following upon this, exhaustion became marked, necessitating the recumbent posture, and was accompanied by profuse sweating, chiefly affecting the head, back, and thorax. There was also some muco-purulent expectoration, lasting, however, but two or three days.

Physical exploration revealed impaired resonance of both lungs, specially the right, over which mucous and sonorous râles were heard. The respirations varied from 18 to 32. Steadily increasing and marked dyspnoea was rapidly developed, as if from pressure on the bronchial tubes. The expectoration was chiefly frothy mucus. Death occurred on November 6, 1879.

Section cadaveris.—This revealed numerous tumors occupying the substance of both lungs, chiefly the right, which was almost wholly converted into a mass of sarcomatous tissue. The thoracic walls were also studded with similar growths. The right lung was adherent to the diaphragm, and from the thoracic cavity of the same side five and a half quarts of sanguineo-serous fluid were removed. The liver and kidneys were both healthy. Other organs not examined.

For the notes of the case Dr. Nancrede said that he was indebted to Dr. Bickford, who had been his resident at the time of the man's admission, and who attended him until his demise.

Report of the Committee on Morbid Growths.—"The tumor presented by Dr. Nancrede from a microscopic examination is found to have the histological structure of a sarcoma, viz., consisting of cells possessing a relatively large nucleus; the majority of the cells have a spindle-shape. The intercellular substance is small in amount and granular. The blood-vessels present the characteristic appearances met with in this class of neoplasms, being embryonal in structure. From an examination of a large section, it is seen that the growth has penetrated between the neighboring fasciculi of muscular and fibrous tissue, also the surrounding adipose tissue is infiltrated by the new formation.

"January 22, 1880."

Carcinoma of pyloric extremity of the stomach. Presented by Dr. J. C. WILSON.

The specimen was removed from the body of a man, 56 years of age, who was admitted to the medical ward of the hospital of the Jefferson College on the 15th of November, 1879, and died six days after.

He stated that his health had been good until the winter of 1878-79, when he had several attacks of cold and lost strength, which was never regained. During the winter he was dyspeptic, and began to suffer pains in the epigastric region, most intense some time after eating, a sense of weight, belching, occasional vomiting, which never contained blood. These symptoms continued

until two months ago, when the vomiting ceased and the pain became less irksome.

Has had several attacks of faint jaundice, habitual poor appetite, constipation, with occasional but never long-continued white stools.

A few weeks before he came to the hospital he became dropsical.

On admission, there was extreme universal anasarca, with evidence of large abdominal and moderate pleural and pericardial effusions. There was slight tenderness of the belly on palpation. The respiratory murmur was faint, and not well heard through the thick and œdematous chest-walls. Heart-sounds feeble; at apex a faint systolic murmur; the second aortic sound not relatively intensified. Liver dullness in mammary line and in the line of the anterior axillary fold not decreased. The urine, on admission, contained no albumen; later, a trace.

At the autopsy, the heart was found enlarged, fatty, its muscle-substance the color of a faded leaf, mottled and streaked. The coronary arteries were rigid and highly degenerated. The leaflets of the mitral valve were thickened; those of the aortic valves and those of the right heart showed no morbid change. Kidneys small; the cortex diminished; capsules adherent. The stomach was found to be the seat of a tumor situated at the pyloric extremity, cylindrical in shape, measuring transversely two inches and longitudinally three inches. The opening into the duodenum remained patulous, admitting the finger without difficulty, which is astonishing considering the size of the tumor. An examination of the other viscera showed them to be free from secondary deposits.

Carcinoma recurring in the axillary glands after excision of a tubular carcinoma of the male mamma. Presented by Dr. S. W. GROSS.

On the 24th of March, 1879,* I exhibited a scirrhus carcinoma of the breast of twelve months' duration, along with two infected lymphatic glands, which had been removed from a male subject, 59 years of age. On the 7th of the following August, the patient returned to me with a cluster of glands in the axilla, which were hard, discrete, and mobile. The cicatrices of the former operation were sound, and the skin was free from disease. I advised immediate operation, but this was postponed until December 31, when I excised, along with a portion of the adherent skin, a mass as large as a hen's egg, which was composed of twelve closely united glands, as well as four isolated glands. They were for the most part densely hard, although five were elastic and deeply blood-stained. Their structure, under the microscope, reproduced the characteristics of the primary growth.

Perforation of the appendix vermiformis. Presented by Drs. ESKRIDGE and MILLS, for Dr. J. C. NORRIS.

Mr. J. F. D., aged 53 years, left Batavia, New York, in good health, on Thursday, September 25, 1879, for Bethel, Connecticut. After his arrival at the latter place he partook of a luncheon of cheese and grapes, and soon afterwards was seized with severe pain in the hepatic region. He was attended by Dr. A. E. Barber, who has kindly furnished a brief statement of his experience with the case. Dr. Barber says that he was first called in to see Mr. D. on Friday, September 26. He found him suffering pain in the hepatic region, with a little tenderness over the abdomen. Morphine was administered hypodermically, and gave relief. He was more comfortable on Friday evening, but his tongue was somewhat coated, his pulse was 115, and he had some fever. On Saturday morning he seemed better; his pulse was 100, and he still had some fever. A fever mixture and morphine and camphor-water were ordered. Saturday night he was restless and had considerable pain, but slept most of the time until Sunday morning. On Sunday, Monday, and Tuesday he became more comfortable each day, and, as he was up and around on Tuesday afternoon and on Wednesday, Dr. Barber reluctantly consented to his leaving for Maryland, recommending him to wait a day or two longer. As he felt comfortable, however, he concluded to go as far as New York City on Wednesday. He reached that city without special inconvenience or discomfort, and on Thursday came in a Pullman car to Philadelphia. On his arrival he refused to take a carriage, but rode in a street-car to 921 N. Sixteenth St., where he intended to stop for a short time. He took a bath and ate his supper, and afterwards Dr. J. C. Norris was called in to see him. Dr. Norris found that he was not suffering much. He complained of slight pain in the hepatic region, but had no cramps and no abdominal tenderness. His pulse was 120, feeble, and occasionally intermitted; his tongue was brown and dry; his extremities were cold, but the doctor thought that he had not reacted thoroughly from his bath. He prescribed opium, digitalis, and camphor; and whisky, beef-tea, and milk were ordered. Dr. Norris was sent for at five o'clock the next morning (Friday). He found him cold and pulseless; he continued to sink, and died at 7 A.M. His wife stated that he had been on his feet at one o'clock, and after this seemed to sleep well, but at four o'clock she found that he was cold. He complained of nothing during the night.

The autopsy was held twenty-four hours after death. Muscles rigid and body well frozen. All the tissues appeared well nourished. Fat was abundant, being an inch thick over some portions of the body. The thoracic and abdominal cavities only were examined.

* See Phila. Med. Times, vol. ix., No. 303, p. 484.

Thorax.—The lungs were apparently healthy. The heart was nearly normal; slightly hypertrophied, and well supplied with fat, but no evidence of any of the muscular fibre having undergone fatty degeneration. All the valves and orifices were normal. Beginning ossification of the walls of the ascending portion of the arch of the aorta was present.

Abdomen.—The walls were very thick from the abundant deposit of fat. The entire peritoneum was more or less injected, and the lower portion, especially that on the right side, highly inflamed. Pus and lymph filled Douglas's cul-de-sac and a large portion of the right iliac fossa. The bowels, peritoneum, and walls of the right lower portion of the abdominal cavity were intimately adherent. Those portions of the bowels and peritoneum which lie in this region of the abdomen were so closely glued together that the pus formed in their interspaces was unable to escape, a large fluctuating substance like an abscess of huge size being thus formed. When the adhesions were carefully torn away, over half a pint of pus was found in the tumor-like mass. The bowels immediately above and below the vermiform appendix were highly inflamed, darkened, and softened, with the mucous surface undergoing the suppurative process. In the cul-de-sac of Douglas, after repeated searches for some offending substance, a cylindrical body three-fourths of an inch long and one-fourth of an inch in diameter was found. Sections of this under the microscope showed it to be composed of fecal matter.

This case, like those of a similar nature previously reported to this Society, well illustrates the importance of keeping the patient and his bowels perfectly quiet for a length of time when any trouble in the region of the appendix is apprehended. Had this man remained quiet for a week or two, suppuration, if it had already begun, might have been arrested, or, if perforation had taken place, death would possibly not have resulted, because adhesions had already formed around the region of the appendix sufficient, if the recumbent posture had been maintained, to prevent the general diffusion of pus, which gives rise to shock. Cases are on record, and some have occurred in the practice of members of this Society, in which recovery has taken place although all the symptoms of inflammation and suppuration in this region have been present. In these, after recovery, a large tumor has been found in the right inguinal region.

Cancer of œsophagus and stomach. Presented by Dr. L. S. CLARK, for Dr. NEWCOMET.

Captain N., æt. 54, robust, florid complexion, a spirit-drinker; employed as captain in merchant marine; during the war pilot on transports; since the close of the war a hotel-keeper, but for the last few years again on water as pilot, his last service being on Fairmount boats.

About August 20 he called at my office, complaining of, as he called it, *acid dyspepsia*; he had an acid taste in his mouth, with vomiting, but not much pain. He still kept at his post, but began to lose flesh and strength, the distress becoming more marked, with difficulty in swallowing, which increased very rapidly. Solids were entirely discarded; even rice and barley could not be taken; milk was taken for some time, but frequently vomited; always complained that it hurt him; beef-tea and milk would "come up," as he called it, while water did not distress him so much.

During the act of deglutition he placed his hand over the lower part of the œsophagus, saying, "Here it is," and in a few moments he would regurgitate, apparently by spasmodic action. No nourishment could be taken by mouth for nearly two weeks, during which time he complained of pain over the cardiac region. The family record was good, so far as cancer was concerned.

The post-mortem showed an extensive diseased condition of the stomach and œsophagus.

Report of the Committee on Morbid Growths.—"The specimens were so far advanced in decomposition that it was impossible to make a histological examination of them."

"January 22, 1880."

Cancer of the œsophagus. Presented by Dr. L. S. CLARK, for Dr. NEWCOMET.

P. R., æt. 57, a robust German, in this country twenty years; surrounding circumstances (locality, etc.) fair; habits very fair.

About four years ago he began to notice that while drinking, especially beer or wine, there would be regurgitation (it would come up without an effort, as in emesis). He was frequently accused of intoxication on that account when he had drunk nothing.

On May 4, 1869, he met some friends in a wine-house, when the above-named trouble was observed and he was advised to call on me. I was convinced there was stricture of some kind. Professor Agnew examined him about a week later, and verified my diagnosis. On swallowing he made a double effort. By applying the ear to his chest along the lower part of the œsophagus one could hear a second sound as produced by swallowing.

Solids were rejected at once. Semi-solids could be taken with great difficulty, only a little at a time and at long intervals. He soon became unable to swallow anything but liquids, and even beef-tea could not be taken. Wine and water, a teaspoonful at a time, at intervals of about ten minutes, were retained. At last he would take nothing but ice. Strange to say, he had no craving for food.

He was very much emaciated; had no pain, and was hopeful to the last. Died without a struggle, purely from exhaustion, on July 18, 1869.

On post-mortem examination we found all

the organs in comparatively good condition, except the œsophagus, where we found the tumor submitted to you for examination.

Report of the Committee on Morbid Growths.

—"A section made from the diseased portion of the œsophagus presented by Dr. Clark is found, upon microscopical examination, to have its mucous surface in greater part destroyed by ulceration. At the margin of the ulcer the mucous membrane is seen to have an increase of the laminated epithelium, the inter-papillary processes being very much enlarged, branching, and extending into the submucous tissue; also in this latter tissue are observed cylindrical collections of epithelial cells, separated by a highly-inflamed fibrous connective tissue. The new formation is a squamous epithelioma."

"January 22, 1880."

GLEANINGS FROM EXCHANGES.

RENAL INADEQUACY.—At a recent meeting of the Medical Society of London (*Lancet*, vol. ii., 1879, November 29) Dr. Andrew Clark read a paper on "Renal Inadequacy." He said, "By renal inadequacy I mean that state of the kidney in which it is unable, without material diminution of quantity, to produce a urine containing the average amount of solids and of a specific gravity greater than 1014." The deficiency of solids chiefly affects the urea and uric acid. The urine is pale, almost invariably free from albumen, and deposits no casts. He did not profess to determine what was the exact pathological state of the kidney; but he conjectured that it was one of slight withering and induration, just as sometimes the skin is found withered, hard, and incapable of producing a true unctuous sweat. This renal inadequacy had, so far as he could see, no characteristic symptoms, and we find it out only by searching for a cause which shall be found adequate to the explanation of the patient's trouble. The symptoms and signs most commonly associated with renal inadequacy are flatulent dyspepsia; palpitation, with a very feeble and interrupted capillary circulation; a dry, shiny, waxy skin; numbness, tingling, cramps and pains in the limbs, occasional flushes, worry of brain, and general nervousness; sometimes thickening of the terminal joints of the fingers, and sometimes, but rarely, evidences of gout. One knows in a given case that these symptoms are due to renal inadequacy, not merely because there is a grave deficiency in the excretion of urinary solids, but because whatever diminishes that secretion, or whatever adds to the amount of solids to be excreted, invariably within a short time aggravates the patient's sufferings. Three things are of great importance in these subjects. They are exceedingly vulnerable; they repair very

slowly the damage done by accident or disease; they bear very badly the shock, however slight, of surgical operations,—a fact mentioned by Sir James Paget (*Clin. Lectures*, p. 44). As to prognosis, this state seems capable of indefinite prolongation without serious secondary injury to the organism. Under unfavorable circumstances and bad management death may occur from some local inflammation, from cerebral or other hemorrhage, or from the so-called pyæmic fever, springing unexpectedly out of some, perhaps trifling, surgical operation. Patients who have been the subject of renal inadequacy for over four or five years "have at least a marked and striking physiognomy; they increase in flesh; they become puffy without being distinctly œdematous; the skin becomes dryer, more shiny, and yellower, the features swollen almost to distention; the pupils are dilated, the lips and cheeks of a bluish red, the articulation deliberate and somewhat difficult, and the whole intellectual tone and manner subdued and slow." From one side the physiognomy is like that of pernicious anæmia, from another like that of chronic Bright's disease, and yet it seems distinct from both. As to treatment, the tepid bath, followed by vigorous friction, the use of warm clothing, and the avoidance of passing exposure to cold and damp, with gentle exercise daily in the open air, are indicated. The diet should be light; stimulants should be avoided. The medicines found most useful are small doses of arsenic, with reduced iron at meals, and an occasional mercurial alternative. If digestion is disturbed, he discontinues the iron and arsenic, giving the patient bitters with alkalies between meals, and a mercurial alternative every third night for two or three times.

FUNGUS-POISONING AND ITS TREATMENT.—Muscarine, the active principle of poisonous mushrooms, is antagonized by atropia. When given internally in medicinal doses it produces sweating, salivation, lachrymation, purging, and contraction of the pupil, whilst atropia, as is well known, dries the skin and mouth and dilates the pupil. The antagonism existing between these two great principles can be shown by a very simple physiological experiment. If the minutest trace of muscarine be applied to a frog's heart, its contractions immediately become slower and more feeble, and after a few minutes are completely arrested. If now a drop of atropia be applied to the motionless heart, its action is at once completely restored, and the pulsations continue as if nothing had happened. It is found that in this way a heart may be revived after being motionless for nearly four hours. Brunton has shown that in mammals atropia at once counteracts the effect of muscarine on the heart, just as it does in frogs. In a case of mushroom-poisoning vomiting should be promoted by tickling the fauces, or other means, and a minim of liquor atropiæ should be in-

jected hypodermically, and repeated at intervals, if necessary, until the urgent symptoms have subsided. Although atropia is the best it is probably not the only antidote to muscarine. Ringer and Murrell have shown, in recent papers in the *Journal of Physiology*, that pituri, duboisia, and pilocarpine will all antagonize the action of muscarine on the heart. The antagonism of pilocarpine for extract of *aminita muscaria* is less marked than that of atropia or duboisia. Thus, atropia and duboisia will increase the pulsation of a heart stopped by muscarine thirty beats in a minute, whilst pilocarpine augments the beat only about eighteen in the minute; nevertheless it is found that the increase in the strength is as great after the application of pilocarpine as of atropia or duboisia. It is a remarkable fact that pilocarpine, a sweater and salivator, which slows and weakens or arrests the frog's heart, should antagonize muscarine, which is also a sweater and a salivator and stops the heart.—*Lancet*, vol. ii., 1879, p. 810.

CHOLELITHIASIS AS A CAUSE OF CIRRHOSI HEPATIS.—Cases of cirrhosis due to cholelithiasis have been recorded by several observers, but they are still so rare that the following case from the practice of Dr. Roller, of Treves, possesses considerable interest. A woman, 69 years of age, who had never been addicted to drink, died after suffering for some months from the usual symptoms of cirrhosis of the liver. The autopsy showed general peritonitis of old standing, with signs of a recent inflammatory exacerbation; a perfect anatomical picture of interstitial hepatitis; a gall-bladder presenting the residue of old inflammation, and containing a large gall-stone. As in this case alcoholism could be absolutely excluded, the gall-stone was regarded as the primary cause of the hepatic disease. The various steps of the morbid process were thought to be as follows. First, the gall-stone excited an inflammation of the gall-bladder which resulted in thickening of its walls. From this starting-point the inflammation extended in all directions, but particularly to the transverse colon, as was evidenced by the thickness of the adhesions which bound the right flexure to the gall-bladder. The inflammation crept into the liver along the pathways furnished by Glisson's capsule; here it led to the development of new connective tissue and the resulting cirrhosis.—*N. Y. Med. Record*; from *Berliner Klin. Wochen.*, No. 42, 1879.

THE ELECTRIC LIGHT IN SURGERY.—On December 11 Mr. Berkeley Hill operated at University College Hospital for vesico-vaginal fistula, using an electric light. This consisted of a glowing platinum wire enclosed in a glass chamber, which was itself enclosed in another glass cover. Between the two a current of water flowed. It worked very successfully.

MISCELLANY.

DEFINITION OF EVOLUTION.—The *Chemist and Druggist* observes that it was Herbert Spencer who made the following definition of evolution: "Evolution is a change from an indefinite, incoherent homogeneity to a definite coherent heterogeneity, through continuous differentiations and integrations." And it was the mathematician Kirkman who translated the definition into plain English: "Evolution is a change from a nohowish, untalkable, all-alikeness, to a somehowish, and in general talkable, not-at-all-alikeness, by continuous somethingelseifications and sticktogetherations."

GIACOMINI'S PROCESS FOR HARDENING THE BRAIN.—Giacomini's process for hardening the brain is, 1, to place it in a fifty per cent. solution of zinc chloride for ten or twelve days; 2, then in alcohol for ten days; 3, then immerse it in glycerin with one per cent. of carbolic acid; 4, when sufficient glycerin has been absorbed, it is set aside to dry, and then varnished with gum elastic. It is now firm enough to be handled, and looks like a wax model.

GERMAN EYE AND EAR INFIRMARY.—In the year 1879 there were gratuitously treated in the dispensary of the German Eye and Ear Infirmary (Dr. M. Landesberg, surgeon in charge), 441 North Fifth Street, 1326 patients, of which number 917 were for eye diseases and 409 for ear diseases.

The number of important operations performed in the institute was 101; of minor operations, 167.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 25 TO FEBRUARY 7, 1880.

HEGER, A., MAJOR AND SURGEON.—So much of the order as directs him to proceed to San Antonio, Tex., on or before February 1, 1880, is amended to read on or before February 20, 1880. S. O. 19, A. G. O., January 26, 1880.

WHITE, C. B., MAJOR AND SURGEON.—His leave of absence on Surgeon's certificate of disability, granted him July 24, 1879, extended six months, on Surgeon's certificate of disability. S. O. 20, A. G. O., January 27, 1880.

TREMAINE, W. S., CAPTAIN AND ASSISTANT-SURGEON.—His extension of leave of absence on Surgeon's certificate of disability, of November 11, 1879, further extended twelve months on account of sickness, with permission to go beyond sea. S. O. 18, A. G. O., January 24, 1880.

DR. HANNE, J. V., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence until further orders, on account of sickness, to take effect February 1, 1880. S. O. 26, A. G. O., February 3, 1880.

BYRNE, C. B., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted him December 20, 1879, from A. G. O., extended four months. S. O. 27, A. G. O., February 4, 1880.

CUNNINGHAM, T. A., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 11, Department of Dakota, January 26, 1880.